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PHILOLOGICAL GLEANINGS.†

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NO. IX.

The *verb* expresses that faculty of the human mind by which we assert that any thing exists or does not exist: and as all existence is either contemplated by the mind simply as existence, or as existence in one of its two distinguishable states—*action* or *passion*, therefore the common definition of the verb is sufficiently accurate, viz: "that the verb is a word which signifies *to be, to do, to affirm* or *to assert.* Yet we must observe that the essence of the verb does not consist in the mere signification or *naming* of *existence* or of *action* or *passion;* because so far as that goes, the verb is a mere noun; but what Mr. Tooke has observed is strictly true in language, viz: that the verb is a noun and something more." He has not been pleased to tell his readers what that *something more* really is: and he affects a sort of mystery respecting it, which is peculiarly out of place in a work of sci-

† Condensed from Met. En.

ence; but nothing can be more obvious or less controvertible than that this something more, which is the true characteristic of the verb, is the power of *assertion.*

It is by this peculiarity alone that the verb is distinguished from the noun, as a very few familiar instances will demonstrate. It often happens in language, that the very same identical word, the same in orthography, in pronunciation, and in accent, is both noun and verb. How then can we determine when it is the one, and when it is the other? Very simply, and very infallibly. When it involves an assertion, it is a verb; when it does not, it is a noun. The word *love*, in English, is one of the words which we have just described. It is impossible to tell, *a priori*, whether it will be a noun or a verb in any particular discourse. We wait to see how it is used, and then all doubts will vanish. Thus it is a noun in those exquisite lines—

> ——*Love* is not *love*,
> Which alters when it alteration finds,
> Or bends, with the remover to remove;
> Oh, no! It is an ever fixed mark,
> That looks on tempests and is never shaken.

Again, it is a verb, in the speech of the crafty Richard to his unsuspecting brother:

> I do *love* thee so,
> That I will shortly send thy soul to Heaven.

Against the doctrine that assertion is the peculiar office of verbs, various objections have been urged.

First, it has been said that we may assert, without the express use of verbs: and this is true; but then the assertion is an act of the mind, not expressed, but, as grammarians say, *understood.* The verb is wanting; but its place is not supplied by any other part of speech, such as a noun, pronoun, conjunction, or the like. Now, whether any particular operation of the mind may or may not be understood, without being expressed in speech, is pretty much a matter of habit; and therefore forms the peculiar idioms of different languages; but in general Grammar, we have to regard the operation of the mind itself, whether expressed by one or more words, or to be collected from inflection, relative position, accentuation, or any other mode of signification.

Let us consider a few examples. In the Hebrew language the verb is often omitted. Thus, in the 3d chapter of Exodus (ver. 20,) "the bush burned with fire, and the bush not consumed," that is,—*was* not consumed. Again (ver. 4,) "God called unto him out of the bush, and said, Moses, Moses! And he said, here I,"

that is, here *am* I. And again (ver. 6,) "Moreover he said, I the God of thy father, the God of Abraham, the God of Isaac, and the God of Jacob," that is,—I *am* the God of thy father, etc. So it is in the Greek language. Thus in St. Mark's Gospel, chapter the 10th, verse 18, οὐδεὶς ἀγαθὸς εἰ μὴ εἷς ὁ Θεός —No one good, except one, God," that is, No one *is* good, etc. The same idiom occurs in Latin. Thus, "Nemo bonus, nisi unus Deus," that is,—Nemo *est* bonus, etc.

Nor is our own language a stranger to the same construction. Thus in Milton's beautiful description of our first parents:

> ———In their looks divine,
> The image of their glorious Maker shone,
> Truth, wisdom, sanctitude severe and pure,
> Severe but in true filial freedom placed;
> Whence true authority in men; though both
> Not equal, as their sex not equal seem'd;
> For contemplation he, and valor form'd;
> For softness she, and sweet attractive grace.

That is, whence true authority *is* in men; both *were* not equal; he *was* formed for contemplation; she *was* formed for softness, etc.

Now, in all these cases, the mind performs the act of asserting. In the words of Plato it manifests some action, and declares that something exists; and this manifestation or declaration is not contained in the nouns themselves, which do nothing more than name the conception; thus, when we say "nemo bonus," the assertion is neither included in *nemo* nor in *bonus*, for these are mere *names* of conceptions. *Nemo* is the subject; *bonus* is the predicate; but neither of them includes the copula. The two terms are not connected by any thing which either of them contains, but their connection is inferred by the mind from their juxta-position. But the question, which we have here to consider, does not relate to verbs not expressed, but to verbs expressed; and universally where the verb is expressed, it imports *assertion* either simply or modified, either direct or implied.

A second objection to that account of the verb which we adopt, is, that *connection* and not *assertion* is the distinguishing characteristic of verbs. It is true that the verb connects; but it does more, it declares the co-existence of the connected conceptions as parts of one assertion. The conjunction also connects, but it does not predicate one thing of another, or make up one proposition of two distinct terms. Thus, if we say "*he is good*," the conceptions expressed by the words *he* and *good*, that is to say, the conceptions of a particular man of goodness, are not only connected, but the one is asserted to exist in the other, and to be a quality

belonging to it. Otherwise is it in the speech of the Duke of Buckingham, wishing happiness and honor to his sovereign, Henry VIII.

> ———————May he live
> Longer than I have time to tell his years!
> Ever belov'd and loving may his rule be!
> And when old Time shall lead him to his end,
> *Goodness* and *he* fill up one monument!

Here the same conceptions, viz. those of a particular man and good are connected, but the one is not asserted of the other, and they make up no intelligible meaning when taken together, without the further aid of the verb. We cannot *assert* without connecting our thoughts; for to assert is to declare some one thing of some other thing, which cannot be done without connecting those things together in the mind; and therefore it is that connection is always one characteristic of the verb; but it is a secondary characteristic, being involved in its more important function, that of *asserting*, *declaring*, or *manifesting* real existence.

Thirdly, the verb being ranked with the adjective and participle, under the general head of attributives, it has by some been considered that *attribution*, that is to say, the expression of a quality, or the denoting of the predicate in a proposition, is the proper function of a verb: but again we must remark, that this is but an accidental circumstance, applying to some verbs, and applying to them not as verbs, but in regard to the nouns which they involve. Thus, when we say, "Cicero spoke," the verb spoke includes the name of an act, viz. *speech*, or *speaking*, which, at a certain time, belonged to *Cicero*, and which is predicated of him as having so belonged; but this name is a *noun*, and if expressed simply in connection with Cicero, as Cicero speech, or Cicero speaking, it produces no intelligible meaning: and therefore, in order to convert it into a verb, a power of assertion must be given to it, which is done either by a distinct word, as "Cicero *was* speaking, or, by a peculiar inflection of the same word, as, "Cicero spoke." "All those attributives," says Mr. Harris, "which have this complex power of denoting both an *attribute* and *assertion*, make the species of words which grammarians call *verbs*. If we resolve this complex power into its distinct parts, and take the *attribute* alone, without the *assertion*, then have we *participles*." From this statement it is manifest that the *assertion* is that which constitutes the true characteristic of the verb; and that the *attribute* which it expresses is not essential to it, but may appear under a different form, and constitute another part of speech.

To be significant of time, or, as it has been expressed, to be *nota rei sub tempore*, is still less the characteristic of the verb, than

those other circumstances are, which we have been considering; for existence may be contemplated without any reference to the lapse of time, as when we say "*two* and *two are* four." We cannot, indeed, assert any thing without a declaration of existence, and the existence of all *individual* things is referable to *time.* Time, therefore, is a necessary adjunct of *such* assertion, and consequently of the verbs by which it is effected; but even in these instances the signification of time is but secondary: it is the assertion, that is, the manifestation, or declaration that the truth is so, or so, which constitutes the appropriate function of the verb.

One more objection which we shall notice is, that the infinitive mood asserts nothing, and consequently that assertion cannot be essential to verbs. To which we reply, that the infinitive is not properly a verb, but rather, as some of the ancient grammarians called it, Ὄνομα ῥηματικόν a verbal noun; or Ὄνομα ῥήματος the verb's noun. Hence it follows, that in English we may often use indifferently the participial noun, or the infinitive, as *singing*, or *to sing; parting* or *to part*, etc.

> ———*Parting* is such sweet sorrow,
> That I could say good night, till it were morrow.

Where the sense would be unaltered, if it were expressed thus:

> ———*To part* is such sweet sorrow.

"The Stoics," says Mr. Harris, "had this infinitive in such esteem, that they held this alone to be the genuine ῥῆμα or verb, a name which they denied to all the other modes. Their reasoning was, they considered the true verbal character to be contained simple and unmixed in the infinitive only. Thus, the infinitives περιπατεῖν, ambulare, *to walk*, mean simply that energy and nothing more. The other modes, besides expressing this energy, superadd other affections which respect persons and circumstances. Thus, *ambulo* and *ambula* mean not simply to walk, but mean "I walk," and "walk thou," and hence they are all of them resolvable into the infinitive, as their prototype, together with some sentence or word expressive of their proper character. *Ambulo*, "I walk," that is, *indico me ambulare*, "I declare myself to walk;" *ambula*, "walk thou," that is, *impero te ambulare*, "I command thee to walk;" and so with the modes of every other species. Take away therefore the assertion, the command, or whatever else gives a character to one of these modes, and there remains nothing more than the mere infinitive, which, as Priscian says, *significat ipsam rem quam continet verbum.* To all this reasoning it is sufficient to answer, that if the Stoics refused the appellation of ῥῆμα to all moods but the infinitive, they clearly did not mean by the word

ῥημα that distinction which is commonly designated by the term *verb:* and in truth it appears that they meant by it the predicate of a proposition, and nothing more: for AMMONIUS says, "that every word forming the predicate in a proposition was called a verb." In the view that we have taken of Grammar, the predicate of a proposition must, on the contrary, be considered to be a noun, either by itself, or else as involved in a verb; whereas, the copula of the proposition is the true verb, either alone or combined with the predicate. In the sentence, "Socrates teaches," the copula, that is to say, the essential part of the verb, is involved in the word *teaches.* In the sentence, "Socrates is teaching," it is expressed separately by the word *is*; and conversely in the word *teaches,* the predicate is expressed in the combination with the copula; and in the word *teaching*, it is expressed alone.

What has been already said, will easily lead us to a division of verbs into their different *kinds;* for they either express the simple copula of a logical proposition, or they express the copula in common with a predicate. In the former case, the verb is called by grammarians a *verb substantive*, and simply *affirms* existence; such is the verb *to be* in its purest form. In the other case, the verb expresses being, together with some attribute of action or passion; and as the *name* of such attribute is properly a noun, all such verbs include a noun. We have said that the verb *to be,* in its purest form, is the verb substantive; by which we mean this verb, when it merely answers the purpose of *asserting*, and has a separate subject and predicate, as "Socrates *is* wise," "Socrates *is* reading," etc. Other words as well as the word *is* may be used in the same manner, if it becomes idiomatical, to give them this simple effect: such was the use in Greek of the verbs ὑπάρχω, πάλω, γίγνεται, etc.; and, on the other hand, the verb substantive *is* may be used more emphatically to assert existence; as "God *is*," that is, "God *exists*, or *is existing*."

The nature of the verb substantive is thus explained by Mr. Harris: "Previously to every possible attribute, whatever a thing may be, whether *black* or *white*, *square* or *round*, *wise* or *eloquent*, *writing* or *thinking*, it must first of necessity *exist*, before it can possibly be any thing else. For existence may be considered as an universal genus, to which all things, of all kinds, are at all times to be referred. The verbs, therefore, which denote it, claim precedence of all others, as being essential to the very being of every proposition in which they may still be found, either expressed or by implication,—expressed, as when we say, "the sun *is* bright;"—by implication, as when we say, "the sun rises," which means, when resolved, "the sun *is* rising." Now all existence is either absolute or qualified;—absolute, as when we say "B *is;*" qualified, as when we say "B is an animal;" "B is round;" "B is white or black," etc. With respect to this difference, the

verb *is* can by itself express absolute existence, but never the qualified without subjoining the particular form; because the forms of existence being in number infinite, if the particular form be not expressed, we cannot know which is intended. And hence it follows, that when *is* only serves to subjoin some such form, it has little more form than that of a mere assertion. It is under the same character that it becomes *a latent part of every other verb*, by expressing that assertion which is one of their essentials.

All other verbs, except the verb *to be*, imply *action*, and these are commonly distinguished into *transitive*, *intransitive* and *passive*. It is matter of idiom whether these different classes shall be expressed by different inflections or not; but the distinction of the classes themselves is in the nature of the human mind, and must therefore have some correspondent expression in language. *Active* and *passive* verbs agree in this, that they reciprocally suppose a separate *agent* and *object*, whilst the *intransitive*, by some persons called the *neuter* verb, supposes an action terminating with the agent. In the *transitive verb* the action is considered as passing from the *agent* or *nominative* to the *object*, and consequently the *nominative* takes the lead in the sentence, as, "*John* loves Mary;" in the *passive verb* the *action* is considered as received by the *object* from the *agent*, and consequently the *object* takes the lead in the sentence, as "*Mary* is loved by John." This difference, as we have already adverted to, in treating of cases, needs no further explanation here. The *intransitive verb* includes all those numerous classes of action which terminate in themselves, as, *to sleep*, *to stand*, *to sit*, ect. Some persons reckon the verb *to be* among these, but it seems better to distinguish it altogether as we have done from verbs of action. It will be observed, that by action we do not mean simply motion, but also rest, or privation of motion. Thus, *to stop*, *to cease*, *to die*, are not acts more than *to walk*, *to fly*, *to live*, etc.: in short, whatever imports any diversity in states or modifications of being; and we need not repeat, that the verb does not merely *name* those states, but asserts them to be really existing at some period of time.

Some other distinctions of verbs occur in grammatical works, but they seem all to be merely subordinate to those which we have noticed, or else explanatory of them. And here we remark, that it is not the quantity or degree of action that makes the difference between the *transitive* and *intransitive verbs*, but the simple consideration whether they have or have not a separate *object*. When we say a separate object, we do not mean an object necessarily distinct from the *agent*, for there is a class of verbs called *reflectives*, in some languages, in which the agent is its own *object;* but these verbs are truly transitives. When a person says "I flatter myself," the verb *flatter* expresses an action as pro-

ceeding from the agent *I* to the object *myself.* So in the Latin, "*Ego met mi ignosco,*" "I pardon myself," *ignosco* expresses an action as proceeding from the agent *Ego* to the object *mihi.* An accurate examination of the operations of the mind in such cases will convince us that we really distinguish the *self,* or being, with whom the action originates, and in whom it terminates, into two parts, or, at least, view it in two lights. The being which flatters or pardons is viewed as *transitive,* the being which is flattered or pardoned is viewed as *passive.* This power of self-contemplation is the origin of the ancient fable of Narcissus; it is the foundation of that moral rule which the philosophers of antiquity considered to be divine,

E cælo descendit γνῶθι σεαυτὸν.

Socrates very finely distinguishes between the physical and moral power of contemplation by remarking, that the eye, which sees every thing else, cannot see itself; whereas, there is no created object which the human mind can or ought so much and so profoundly to contemplate as its own existence and energies.

Nothing but extreme vanity can lead one to suppose that all the great men who have considered this subject before him, have been involved in a more than Bœotian mist of ignorance; and that *he* alone can dispel the cloud by a single "electric flash." The more modest and rational will confess with the learned Harris, that "there is one TRUTH, like the SUN, which has enlightened human intelligence through every age, and saved it from the darkness both of sophistry and error." It may be safely adopted as a general observation, that the man who tells you the whole world was ignorant of any particular subject, until he arose to set them right, is himself egregiously in the wrong. The study of Grammar, indeed, like all other studies, is susceptible of gradual improvement; but if we admit that the ancients had a tolerable insight into the powers and operations of the human mind, we must acknowledge that they could not be entirely ignorant of the modes in which those powers and operations were manifested by language. An individual writer, whether ancient or modern, may have taken a limited view of the subject; but that view could not be wholly erroneous, if he was adequately versed in the philosophy of the human mind.†

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†We recommend these concluding remarks to the particular attention of the innovators of the present day, lexicographers, grammarians, etc., who, claiming for themselves all learning and wisdom, set up an ideal standard of their own, shaped in the mould of their freakish minds, and quarrel with and attack every man who does not believe in its perfection, and who laughs at their folly. ED.

THE PAST AND THE PRESENT.

BY JOHN W. PICKET.

PART III *

We now proceed to name some other opinions, entertained by the ancients, which tend to show, that many of the modern systems and discoveries are predicated upon those of ages long past, and which, after having been several times adopted and abandoned, have been revived by persons, who, considering themselves the originators, claim the praise due only to bold and inventive genius. The length of time that has elapsed since the days of the Greek philosophers, has enlarged our knowledge upon particular subjects more perhaps than it has opened to us general views. In many instances, it is certain, it has revived long exploded opinions. The sexuality of plants, for example, forming the basis of the system of Linnæus,† was a theory known in the age of Aristotle, and though in this case, as in others, it has received the improvements of modern skill and science, the glory of the first idea belongs to the fertile genius of the philosophers of other days.

The opinion of Lucretius, of the elementary character of matter, is the same as that entertained at the present day. Writers on this subject may be divided into two classes; those who believe in the penetrability of matter, as Mitchell, Priestly and Boscovitch, and those who believe in its impenetrability, at the head of whom stands Newton. His opinion is, "that it seems probable, God, in the beginning, formed matter in solid, massy, hard, impenetrable, movable particles of such sizes, figures, and with such other properties, and in such proportion to space, as would be most conducive to the end for which he formed them; and that

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*Concluded from page 420 Academician.

† The sexual system of plants was invented, or, perhaps more properly speaking, revived by Linnæus, Professor of physic and botany at Upsal, in Sweden. It is founded on the parts of fructification, viz. the stamens and pistils; these having been observed with more accuracy since the discovery of the uses for which nature has assigned them, a new set of principles has been derived from them, by means of which the distribution of plants has been brought to a greater precision, and rendered more conformable to true philosophy, in this system, than in any of those which preceded it. Hooper's Lex. Med.

these primitive particles, being solid, are incomparably harder than any porous bodies compounded of them; even so very hard, as never to wear away and break to pieces: no ordinary power being able to divide what God himself made one in the first creation. While the particles continue entire, they may compose bodies of one and the same nature and texture in all ages; but should they wear away, or break in pieces, the nature of things depending upon them, would be changed. Water and earth, composed of old worn particles and fragments of particles, would not be of the same nature and texture now with water and earth composed of entire particles in the beginning. And, therefore, that nature may be lasting, the changes of corporeal things are to be placed only in the *various separations* and *new associations* and *motions of these permanent particles;* compound bodies being apt to break, not in the midst of solid particles, but where those particles are laid together and touch in a few points." Hence arises the indestructibility of matter. It undergoes changes in form, but cannot be annihilated.

Those who are acquainted with the writings of Newton and Locke, will perceive in the atomic philosophy, the rudiments of a large portion of their own systems, as far as relate to physics. We may, indeed, fairly regard them as offsets of that theory, cleared in a very great degree of its errors, and enlarged in their principles, and fortified by more recent observations and discoveries.*

The atomic philosophy was taught by Moschus, before the time of the Trojan war.† It was introduced by Leucippus‡ or Democritus‖ into Greece, and subsequently improved by Epicurus,§ whose doctrines were rapidly and widely disseminated among the Greeks and Romans. The tenets of Epicurus and Empedocles¶ prevailed at the time of Lucretius, a Roman poet, and the best of the ancient physiological writers. These were warmly embraced by him,** and when united with the doctrine of the infinite of Anaximander†† and the atoms of Democritus, he explained and elucidated in a poem, in six books.

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*Good's Book of Nature, Lect. 2.

† The city of Troy was burnt by the Greeks, according to the Arundelian marbles, 1184 years before Christ.

‡ Leucippus, a philosopher of Abdera, lived about 428 years, B. C.

‖ Democritus died 361 years before Christ.

§ Epicurus died 270 years before Christ.

¶ Empedocles, a philosopher, poet and historian of Agrigentum, now called Girgenti, in Sicily, flourished about 444 years B. C.

** Lucretius died about 54 years A. C.

††Anaximander, a Milesian philosopher, the companion and disciple of Thales, flourished 568 years before Christ. He made the first geographical maps, and sundials. By some, it is said he was the first who constructed spheres.

The atomic philosophy, as taught by the ancient philosophers, in its mere *physical* contemplation, allows, to use the language of Dr. Good, of nothing but matter and space, which are equally infinite and unbounded, which have equally existed from all eternity, and from different combinations of which every visible form is created. These elementary principles have no common property with each other; for, whatever matter is, that space is the reverse of; and whatever space is, matter is the contrary to. The actually solid parts of all bodies, therefore, are matter; their actual pores, space; and the parts which are not altogether solid, but an intermixture of solidity and pore, are space and matter combined. Anterior to the formation of the Universe, space and matter existed uncombined, or in their pure and elementary state. Space, in its elementary state, is an absolute and perfect void; matter, in its elementary state, consists of inconceivably minute seeds or atoms, so small that the corpuscles of vapor, light and heat, are compounds of them; and so solid, that they cannot possibly be broken or abraded by any concussion or violence whatever. The *shapes* of these primary atoms are considered very various, but not diversified to infinity; but the *atoms themselves* of each existent shape, are infinite. Every atom is possessed of certain intrinsic powers of motion. Hence sprung two kinds of perpetual motion; a descending caused by the natural gravity of the atoms; and a rebounding, by collision and mutual clash. In order to the explanation of certain other phenomena, to which these laws were inadequate, Epicurus supposed that some atoms were occasionally possessed of a third motion, of an oblique or curvilinear direction, deviating from the common and right line anomalously; and resembling in this respect the oscillations of the magnetic needle.*

Lucretius, in attempting to explain the constitution of the Universe and the general phenomena of nature, assumes that matter in its primary form, consists of very small particles, which, from their supposed incapability of further division, are called *atoms*, and these atoms flying through all time and space, in different directions and under different laws have united, and in one combination, they form earth, in another, air, and in another, they produce vegetation and animal life. All matter is undergoing a constant change either of composition or decomposition; new combinations are forming from the dissolution of bodies: but the primary particles of which bodies are composed, are eternal and indestructible.

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*Good on the Elementary and Constituent principles of things.

Lucretius denies the infinite divisibility* of matter, since on that supposition, the smallest bodies would consist of an infinite number of parts; and he consequently concludes that those indivisible bodies or atoms must be perfectly solid. He impugns the doctrines of the philosophers who supposed that all things were formed by the union of earth, air, fire and water, and contends that the *original* atoms of matter, may, by a mere variation in the modes of combination, produce all the objects of nature, whether organic or inorganic; illustrating his argument ingeniously by a reference to the fact, that an endless variety of words, of the most different meaning and sound, is produced by various combinations of the same letters.†

Abstracting from the atomic theory, as held by Epicurus, Lucretius, and Empedocles, the atheistical tendency of some of their opinions, it cannot be denied that, so far as it relates to the mere *physical* constitution of things, it rests on a legitimate basis, and the experiments of chemists at the present day confirm the prominent doctrine of that philosophy, that one substance is as much a constituent element as another, and that every material existence proceeds from the combination of the primitive atoms,‡ and is in turn resolved into these original principles of matter. So far, indeed, was the belief in this doctrine carried by this sect of philosophers, that they were led to suspect, that earth, water and air were compound substances. Modern chemists have shown by experiments, that what they surmised, though we know not on what particular grounds, is actually the case; and as relates to fire, notwithstanding the labors of Pictet and other eminent men, we have no more knowledge of its real nature, than the ancients. If the old philosophers were mistaken in regard to the nature of what were then called the four elements, the same in regard to other substances has repeatedly occurred among the moderns. A number of substances has been deemed, in recent times, elementary, but chemical ingenuity has shown them to be compounds; and it is not improbable, that the list of simple bodies, which are now estimated at some forty-five or fifty, may, in a few years, be

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* *Mathematically* speaking, a line may be infinitely divided; *physically* speaking, the proposition is not true.—Space, however, is not matter, and if, therefore, its infinite divisibility were proved, yet this would not prove the infinite divisibility of matter. Philosophy leaves this point undetermined; but chemistry shows by the analysis of bodies, that they are composed of atoms, or particles, or, as some call them, molecules, which are incapable of a further division.

† Kidd's Physical Condition of man.

‡ The opinion at present entertained by chemists in general is, that simple substances are aggregates of very minute particles, incapable of further division; and therefore called atoms. Thomson's Inorganic Chemistry, v. 1. p. 3.

reduced to some six or eight.‡ The discoveries of Davy of the metallic bases of the alkalies, may perhaps be considered harbingers of others, more remarkable, in the subtle agencies of magnetism, galvanism, electricity, light, caloric and motion. We are not, however, among those, who expect to ascertain with exactness the elements of these agents, because, although we believe them all, from their close analogies and intimate relations, to be, at least, modifications of the same universal, ethereal agent, yet we believe that the subtlety of its nature will cause it to escape the most careful observation and refined analysis.

The Epicurean doctrine, moreover, of a flux and reflux of elementary particles exterior to every material system, perpetually feeding and replenishing it, carrying off its resolved and rejected rudiments, bears no small resemblance to the ethereal medium of Sir Isaac Newton; and its law of action has been singularly revived by Leslie in his principles of impulsion, as detailed in his inquiry into the nature of Heat. It is a doctrine, also, peculiarly coincident with Dr. Herschell's theory of Nebulæ†. Modern astronomers, as well as some of the ancient, attributed the milky ways or nebulosities in the heavens to the confused light emitted from clusters of stars at an immeasurable distance. Sir William Herschell was at first of this opinion, but he subsequently changed it, and resolved the phenomenon into a luminous fluid, existing independently of all celestial bodies, and pervading the universe. He thought he could perceive the gradual and regular condensation of this nebulous matter into a nebulous star, and hence was led to conjecture, that there is a constant formation of new worlds going on, in consequence of the consolidation of this luminous nebulosity. La Place,* too, was of this opinion, and from the con-

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‡ All, or almost all, the substances found upon the globe of the earth, have been subjected to chemical investigation. The result has been, that all the animal and vegetable substances without exception, and by far the greatest number of mineral bodies, *are compound.* Dr. Thomson's Inorganic Chemistry, v. 1. p. 2.

† Good on the Elementary and Constituent nature of things.

* The sceptical La Place *imagines a time*, when the sun, having a revolution on its axis, was surrounded by an atmosphere, which, on account of the excessive heat of the luminary itself, was so dilated that it extended beyond the orbits of the planets, the planets themselves then having no existence. But in proportion as the temperature of the sun decreased, the rotation increased, and the centrifugal force of the most distant portion of the atmosphere overcoming the centripetal force, that is the attraction of the sun, a ring of vaporous matter was separated, which breaking into pieces, united together, and forming an independent mass, began to revolve round the source of light. As the cooling went on, other zones would be thrown off, and thus new vaporous planets would be formed. The same he supposed to take place with the planets thus formed, and hence accounts for the existence of the satellites. Whewell's Astronomy, p. 187.

In reference to this, we may truly say, that the age of wild hypotheses has not passed. La Place's theory is on a footing with those of Whiston and Buffon, and

jecture of Herschell, he was led to the invention of an hypothesis by which to explain the manner in which the solar system was formed. Whether any explanation of this phenomenon can ever be given, the fact itself was alluded to by the *disciples of the atomic philosophy.*

We have already referred to the expression,—the Harmony of the Spheres—and endeavored to show what Pythagoras* understood by it. We again call the reader's attention to the same philosopher.

The theory of vision was a matter of speculation among the ancient philosophers. It is true, that on this subject, there were then contending hypotheses, and the same may be said of the pres-

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other world-makers; and is an additional evidence, that an uncurbed imagination or perverted judgment will land an individual in the region of doubt and inconsistency.

* We might perhaps have introduced the following from Good's Book of Nature, more appropriately under our remarks in the last number, when speaking of the Pythagorean doctrine of the sphere. They refer to a curious fact, in Dr. Good's opinion, and they are confirmatory of the sentiments advanced in the second part of our article.

Numbers, it is well known, were not more generally had recourse to by Pythagoras, to typify elementary matter under different modifications, than they are at present by the most elaborate chemists to express its particular combinations. "As in all well known compounds," observes Davy, "the proportions of the elements are in certain definite ratios to each other, it is evident that these ratios may be expressed by numbers," and they are now so expressed by chemists, the hint having been suggested by Higgins and Dalton. The doctrine of numbers was hence used in the Pythagorean system, in explanation, not only of the endowment of different portions of matter with different forms, but of the harmony with which the different natures of matter and mind unite in identic substances. Numbers and forms are, in consequence, frequently contemplated as the same thing—as the models or archetypes after which the world in all its parts is formed—as the cause of entity to visible beings.

It was hence that Pythagoras was led to ascribe to the primary or elementary forms of bodies, in their unions with each other, relative portions so exact, yet so diversified, that forms and numbers may be employed as synonymous or convertible terms, and have exhibited so close a coincidence with one of the great discoveries of the present age—*the chemical law of definite proportions.* It is well known to chemists, that the combinations and separations of all simple bodies are conducted in a definite and invariable ratio of relative weight or measure, as that of one part to one part, one part to two parts, one to three, one to four, and consequently that every change or diminution is a precise multiple or divisor of such ratio. And, hence, as these proportions, though constantly true to their respective series, are constantly diversified in different substances, their radical figures or numbers may be, and are, employed in perfect coincidence with the system of Pythagoras and his followers, as synonymous with the simple forms or substances whose progressive character they describe. Mr. Good considers it a curious and wonderful coincidence between ancient and modern philosophy, and a very marvellous fact, and concludes his remarks upon this subject with the sublime truth, that this law affords another proof of the close connection between the phenomena of nature and the occasional developments of revelation; the philosopher beholding now, as the prophets of old beheld, that the Almighty architect has literally adjusted every thing by weight and measure; that he has measured the waters and meted out the heavens; accurately comprehended the dust of the earth, weighed the mountains in scales and the hills in a balance.

ent day. The Platonists and Stoics, and also Empedocles, conceived that vision was effected by means of the emission of rays from the eye, and meeting with those continually flying off from the surfaces of bodies, returned to the eye, and made an impression which gave the sensation of light. Metrodorus, the preceptor of the physician, Hippocrates, and Heliodorus Larisseus were of the same opinion. In more recent times, the celebrated Roger Bacon, also, believed that the visual rays proceeded from the eye, and urged as a reason for his belief, that every thing in nature is endowed with powers peculiar to itself, by which its proper functions may be carried on. The Epicureans held, that vision was performed by the emanation of corporeal species or images from objects; and the Peripatetics differed from them in their opinion of the nature only of those species, which they considered as incorporeal. But Pythagoras taught that the light of the sun, falling upon objects, is reflected by them to the eye, where striking upon some particular part of it, the mind by some mysterious organization, perceives it. It is not known, whether Pythagoras had any knowledge of the functions performed by the coats and humors of the eye, and the formation of the inverted image of the object upon the retina, yet the doctrine, as far as we know, as he taught it, corresponds with the Newtonian and Cartesian, which makes the light reflected from bodies to impinge upon the eye, and the impression is conveyed by the capillary vessels of the optic nerve to the brain, where the mind takes cognizance of it.

Whatever might have been the actual knowledge of the Pythagoreans on this subject, we may remark, that the doctrine of emission and intermission was not fully settled till the sixteenth century. The first who satisfied himself and others, that vision is performed by the intermission of rays into the eye, and not by the emission of visual rays from the eye, was Baptista Porta. His experiments with the Camera Obscura, threw new light upon the subject. It was about that time, too, that Maurolychus,* a Sicilian abbot, explained very accurately, the structure and functions of the eye, and more especially of the crystalline humor. He, however, did not discover the inverted image of the object on the retina. This was reserved for Kepler, who never attempted

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* The same Maurolychus measured the circumference of the earth by the help of the 6th propos. 2d B. of Euclid.—Eratosthenes, (by the 29th prop. B. 1. of Euclid, and the propositions on which its demonstration depends, viz. the 13th, 18th and 15th, B. 1. Euc.) found out a way of measuring the circumference of the earth. He was the first, that is known, who attempted it; and if we consider the earth a true sphere, his result was very nearly correct.—Thales, it is said, first measured the height of the pyramids of Egypt by their shadows, and it is probable that he used the 6th prop. B. 1. of Euclid, the converse of the 5th for that purpose. The 6th serves for taking the dimensions of every sort of inaccessible lines.
Euclid's Elements, by John D. Craig.

to account for it, and it was left to Schiner, who first discovered the solar maculæ, or spots upon the sun, to demonstrate that the retina is the proper seat of vision. It would, indeed, be something of a task to enter into a minute account of the various opinions* which have been formed in regard to the seat of vision, and it must be sufficient to remark, that Mariotte's opinion, that it is located in the choroidal coat, and M. Lehot's that it is anterior to the retina, and that vision is effected by images of three dimensions, formed in the vitreous humor, are all proofs of the slow progress of physical science, and that writers are as much given, at the present day, to the formation of hypotheses, as those were of former ages. And, to conclude on this point, it is an error to suppose, that, in their investigations of this subject, with minds of a superior order, and with powers of great observation and discrimination, the ancient philosophers did not enter into those optical dissections, examinations and experiments, which the very characacter of their organization would induce, and would lead us to believe.

Immediately connected with vision is light. On this subject, it is well known, there are at present two theories. It is not consistent with our plan to enter into the merits of either the Newtonian† or Cartesian;—whether light ‡ consists, according to the

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* See Library of Useful Knowledge, article Optics. Farrar's Optics. Dunglison's Physiology. Brewster's Optics, etc.

† Each of these theories is beset with difficulties peculiar to itself; but the theory of undulations has made great progress in modern times, and derives such powerful support from an extensive class of phenomena, that it has been received by many of our most distinguished philosophers.

Dr. Brewster's Optics, p. 118.

La Place thought that light was an emanation from the sun.

The undulatory system of light comes nearest to the Mosaic fact, that light was a distinct production anterior to the sun; and appears to be gaining ground in philosophical minds. Turner's Sacred History, v. 1. p 74.

‡ In the Newtonian system, light is supposed to consist of material particles, and to move with a velocity of 192,000 miles in a second.

Euler's Letters on Nat. Phil.

J. W. Herschell, Dr. Young and Dr. Brewster, who adopt the theory of undulation, say, modern optical discoveries have disclosed, that *every point* of a medium through which a ray of light passes, *is affected* with a succession of periodical *movements*, regularly recurring at equal intervals; no less than 500 *millions of millions* of times in a second. It is by *such movements* communicated to the nerves of the eye, that *we see*, and distiguish different colors.

J. W. Herschell's Discourse on Nat. Philos.

Thus Dr. Brewster gives the numbers from Herschell with a little variation.—During one swing of the pendulum, the following number of undulations takes place:

Red	477,000,000,000,000	Blue	622,000,000,000,000
Orange	506,000,000,000,000	Indigo	658,000,000,000,000
Yellow	535,000,000,000,000	Violet	699,000,000,000,000
Green	577,000,000,000,000		

Brewster's Optics, p. 119.—Bache's Edition.

J. W. Herschell remarks, "from this table, we see that the sensibility of the eye is confined within much narrower limits than the ear; the ratio of the extreme vi-

former, of inconceivably small particles of matter, which are emitted in straight lines in every possible direction, and with an immense velocity, from the luminous body, by a repulsive force, or, whether, according to the latter, light be a fluid *per se*, pervading the whole universe, at all times, and requiring to be set in motion by some body suited to make objects visible. Father Malbranche, embracing the Cartesian notion, was led from some analogy between sound and light, to suppose that, as sound was diffused by atmospheric undulations or waves, so the sensation we call light was occasioned by the pressure of the subtle matter between the luminous body and the eye, in consequence of the undulations excited in an ether of extreme rarity by the action of the sun's rays. This theory was embraced by Hooke and Huygens,* cotemporaries of Newton. Newton opposed it, but it was afterwards revived by Euler, and has received very powerful advocates in Young,† Fresnel, Herschell, and others.‡ Long, howev-

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brations being nearly 1.58 to 1., and therefore less than an octave, and about equal to a minor sixth. That man should be able to measure such minute portions of space and time, is not a little wonderful; for, it may be observed, whatever theory of light we adopt, these periods and those spaces have a *real existence*, being in fact deduced by Newton from direct measurements, and involving nothing hypothetical, but the names here given them."

*In the middle of the 17th century, Erasmus Bartolinus, a Danish mathematician, opened a new field for optical experiments and speculation. He received from Iceland, specimens of Iceland Spar, which is a carbonate of lime, in a crystallized form. While experimenting with pieces of this crystal, he discovered that it exhibited a double image of objects seen through it, and that both the refracted rays did not obey the Snellian law; but that one followed the common and the other an extraordinary law.

Before this discovery, Huygens had published his theory of undulation. He turned his attention to the subject of double refraction, in order to obviate objections to his doctrine. While examining the two rays into which the incident ray is cloven by the Iceland spar, he discovered one of the facts from which Newton subsequently deduced the polarization of light. Hersch. Acc. of Newton's Optics.

In order to discover the law respecting double refraction, Huygens measured the double refraction at different angles, and found that the reciprocal of the index of refraction of the extraordinary ray was measured by an ellipse, whose lesser axis is to its greater as $\frac{1}{1{\cdot}6543}$ is to $\frac{1}{1{\cdot}4833}$ reciprocals of the greatest and least indices of extraordinary refraction.—See Abbe Hauy's Mineralogy, Brewster's Optics, M. Fresnel's Works, Herschell's Discourse on Natural Philosophy, pages 23 and 24.

† Dr. Young had the great merit of applying the doctrine of interference to explain the colors produced by double refraction. Arago and Fresnel took up the hypothesis of Dr. Young, displayed great address in their investigations of the subject, and succeeded in showing how the production of the rings depended on the polarization of the incident pencil and its subsequent analysis by a reflecting plate, or a doubly refracting prism.

Brewster's Optics, Bache's Edition, p. 180.

‡ The celebrated Dr. Franklin appears to have been the first, or among the first, who recurred to the undulatory theory. Euler, who is called the reviver of it, wrote about 1760. Franklin, in a letter, dated April 23d, 1752, observes, "must not the smallest portion of light conceivable, have, with such a momentum, a force exceeding that of a 24 pounder, discharged from a cannon? Must not the sun di-

er, before the time of Des Cartes, who first started this opinion in modern times, a *similar one* had been proposed by Aristotle. He supposed light to be produced by the action of a subtle, pure and homogeneous matter or ether which the sun put in motion.* It is true he does not expressly say so, but this conclusion flows directly from the facts which he mentions, and the manner in which he discusses the subject. In times past, there must have been theories invented for the explanation of solar as well as many other physical phenomena, and probably those on this subject, like many others, have perished with many of the ancient writings by the hand of time and barbarism.

That light was material,† was the opinion of Lucretius, who in his work, De Rerum Natura, introduces this as one of the doctrines entertained by himself, as well as by some of the philosophers during and prior to his time. "He considered it as a very subtle kind of matter, which from its tenuity is capable of very *swift motion;* the rapidity of which motion he instances in its *nearly instantaneous* diffusion throughout the whole heavens. With respect to the connection of light and color, he not only affirms that the latter cannot exist without the former; but that the particular color observable in different bodies is not inherent in those bodies, and that in every instance it is produced by the direction, or other circumstances, under which light impinges either on them, or on the eye of the beholder; and he gives, as examples, the plumage of the neck of the pigeon, and of the tail of the peacock. He instances the foregoing position by a reference to the color of the sea, which, when viewed in the mass, is blue or green; but when converted into mere spray, is white. And he argues, that color does not belong to the ultimate constituent parts of bodies, on this ground,—that if colored bodies be reduced to minute particles, the color vanishes. He employs terms, which, at the present day, express the fact of the equality of the angles of *incidence and reflexion*, and graphically describes the effect of

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minish exceedingly by such a waste of matter; and the planets, instead of drawing nearer to him, as some have feared, recede to greater distances through the diminished attraction? Yet these particles, with this amazing motion, will not drive before them, or, remove, the least and slightest dust they meet with; and the sun appears to continue of his ancient dimensions, and his attendants move in their ancient orbits." He therefore conjectures, that all the phenomena of light may be more properly solved, by supposing all space filled with a subtle elastic fluid, which is not visible when at rest, but which, by its vibrations, affects that fine sense in the eye, as those of the air affect the grosser organs of the ear; and even that different degrees of the vibration of this medium may cause the appearances of different colors.

* Higgins on the Nature of Light.

† The corpuscular theory of light, which is as old as Pythagoras, was adopted by Newton for the explication of the phenomena of Optics; but, he is careful not to intermingle with the reasoning from his experiments any assumptions from this theory, which could at all affect the validity of his results, all of which are entirely independent of any hypothesis, and such as any theory must account for, before it can be admitted as a true one. Lib. Use. Knowl.—Newton's Optics.

*refraction** in altering the line of direction of the rays of light."†

We do not stop to enquire, whether an analogy might not be found between color and quantity of matter, as here referred to in the masses of water and spray, and Newton's theory of colors of thin and thick plates. But we would remark, that light is distinctly asserted by Lucretius as having progressive motion. This fact had been denied by Aristotle, by Zeno, the Stoic, and Crysippus, the latter of whom endeavored to show its instantaneousness, by supposing a long rod, which, when pushed at one end, instantly moved at the other. But if it were known to be a fact to Lucretius, or to the philosophers from whom he probably borrowed his opinion, the knowledge of it was lost among many other discoveries of the ancients, until the time of Rœmer, a native of Jutland, who in 1644 again ascertained its progressive motion, while making observations at Paris, on the eclipses of Jupiter's satellites.‡ Dr. Bradley subsequently confirmed it in the most beautiful and ingenious manner, by his observations on the aberration of light, and thus proved, what, to say the least, had been conjectured two thousand years before.‖

Another curious coincidence between ancient and modern opinions, is afforded by *heat*. Lucretius believed it to be a material substance, "because it excites a specific sensation in animal bodies. And notwithstanding the obvious alliance between *light* and *heat*, which is observable in many common phenomena and operations, yet he conjectured, what has been most unexpectedly ascertained by the experiments of Dr. Herschell," viz. that there were *invisible* rays issuing from the sun, which had the power of producing heat, and were totally distinct from the rays of

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* Claudius Ptolemy, who lived in the first century of the Christian era, was the first, that is known, who observed with any degree of scientific precision, the phenomena of refraction.

Snellius, about the beginning of the seventeenth century, discovered that the angles of incidence and refraction were always in a constant ratio to each other, as long as the refracting medium remained the same. Des Cartes, eleven years after the death of Snellius, disingenuously claimed the discovery of this law, and published it in his work on Dioptrics.

† Kidd's Physical Condition of Man.

‡ The truth of this was strongly impugned by Cassini, the cotemporary of Rœmer, who first advocated, and then abandoned and attacked it. Halley sustained it very ably.

‖ Galileo was the first in modern times, who conceived the idea of measuring the velocity of light. His experiment was simply as follows:— Two men with lights covered, were placed a mile apart; the one was to observe the other when he uncovered his light, and to exhibit his own, the moment he perceived it. The experiment wholly failed.

light,* emitted from the same source. This fact has been verified by Sir Humphrey Davy and Englefield. And, it may be added, that M. Sebeeck has proved, that the heating power of the colors of the solar spectrum, depends upon the nature of the substance of which the prism is made. Thus with a water prism, the greatest heat is in the yellow; with crown or plate glass, in the middle of the red; with flint glass, beyond the red, and with solutions of sal ammoniac and corrosive sublimate, in the orange.

We pass over many physical facts, mentioned by Lucretius, such as, that rapid motion is the cause of heat; an opinion respecting the different capacities of bodies for heat; that water may exist in the form of an invisible vapor; the equality of the quantity of water that falls into the sea from rains and rivers, and the evaporation from its surface, a fact proved by Halley; the materiality of the atmospheric medium; its physical office as a receptacle and vehicle of sounds and odors, and the effluvia arising from the earth; the mutual attraction of the magnet and iron and its mode of explanation, and many others referred to by that ingenious poet. Nor do we notice for the want of room, the vortices of Des Cartes, nor the monads of Leibnitz, which may be found in the system of Leucippus and Democritus; nor the opinion of Empedocles, who ascribes the phenomena of the syphon in which the water remains suspended, when one of its openings is stopped with the finger, to the *weight and pressure of the air*, and not to the abhorrence of a vacuum. Instances are numerous to show what we have already stated, that the ancients were in possession of more mathematical and physical knowledge than is generally believed, and that many of the discoveries and inventions of modern times are the revivals of those of ages past. As additional exemplifications of these remarks, which occur to us at the moment, we refer to Galileo's discourse on Mathematical Demonstration, in which he acknowledges, that the writings of Plato suggested to him, "that antagonist power by which a rectilinear motion can be converted into an orbicular, and thus laid a basis for accounting for the regular move-

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* The rays of solar light possess several remarkable physical properties: they heat; they illuminate; they promote chemical combination: they effect chemical decomposition; they impart magnetism to steel; they alter the colors of bodies; they communicate to plants and flowers their peculiar colors; and are in many cases, necessary to the development of their characteristic qualities.

Brewster's Life of Newton.

Mr. Ritter of Jena, in 1801, and Dr. Wollaston about the same time in England, discovered that the solar spectrum had different chemical properties, which resided in the violet end of the spectrum, and existed even beyond the violet light. Dr. Morichini of Rome, was the first, some thirty or thirty-five years ago, who noticed the magnetic property of the violet rays of the spectrum, which was subsequently fully established by Mrs. Somerville, a lady of distinguished scientific abilities, and author of the Connection of the Physical Sciences, and that elaborate work, the Mechanism of the Heavens.

ments of the heavenly bodies." The theory of colors, which was illustrated by the genius of Newton, was, according to Plutarch, anticipated, in some degree, by Plato, and who, as an eminent writer has remarked, was the first in Mathematics who developed to us, the analytic method of solving a problem, so successfully cultivated by modern geometricians.

We have referred to the cometary system in a preceding part of this article, and here recur to the subject, It is well known, that philosophers and astronomers have been very much divided in their opinions of comets. Nor is the physical constitution of those bodies, notwithstanding the labors of Newton, Halley, Arago and others, much better, if any, known at present than in former times. The Chaldeans held them to be permanent bodies, and that they revolved, as well as the planets, in orbits, but of far greater eccentricity. The Peripatetics* believed them to be transient fires, or meteors, while Pythagoras, accounted them a kind of planets or wandering stars. But of all the old philosophers, Seneca, who lived in the first century, and had seen two or three comets himself, had the most rational ideas of these bodies. "I cannot believe," says he, that a comet is a fire suddenly kindled, but that it ought to be ranked among the eternal works of nature. A comet has its proper place, and is not easily removed from it; it goes its course, and is not extinguished, but moves from our view. But you will say, if it were a wandering star, it would keep in the zodiac. Yet who can set one boundary to all the stars? Who can confine the works of Divinity to a narrow sphere? For, each of these bodies which you imagine to be the only ones that have motion, have very different circles;—why, therefore, may there not be some that have peculiar motions of their own, by which they are caused to recede far from the rest?" He then

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* Aristotle, Seneca, Plutarch and others, testify, that the Pythagoreans, and the whole Italian sect, maintained, that a comet was a kind of planet or wandering star, which appeared again after a long interval of time. Hippocrates Chius was of the same opinion, as Aristotle informs us: The same was the opinion of Democritus, as we are told by Seneca in his Natural Questions, Book 7, chap. 3. The same author informs us that Appolonius Mindius, one of the most skilful philosophers in the search of Natural causes, did assert, that the Chaldeans reckoned comets among the other wandering stars, and *that they knew their courses.* Appolonius himself maintained, that a comet was a star of its own kind, as the sun and moon are, but that its course was not yet known.

Keill's Astronomy, p. 189.

The remark made by Appolonius, that the Chaldeans knew the courses of the comets, leads us to observe, that after reading many extracts from the works of the Indian astronomers, the inquiry pressed itself upon our mind, whether, inasmuch as the Chaldeans were able to calculate correctly eclipses of the sun and moon, they were not acquainted with the ellipticity of the earth's orbit, and from the Indian Tables, whether it is not deducible that they were acquainted with the law, that the areas described by the radius vector are as the times of description; a law discovered in modern times by Kepler.

proceeds to point out the only way by which we can arrive at truth on this subject,—by collecting a number of observations concerning their appearance, in order to discover whether they return periodically or not. "For this purpose," he observes, "one age is not sufficient; but the time will come, when the nature of comets and their magnitudes will be demonstrated, and the courses they take, so different from the planets, be explained. Posterity will then wonder, that the preceding ages should be ignorant of matters so plain and easy to be seen."

No approximation was made towards the fulfilment of this prediction, till the time of Tycho Brahe,* a Danish astronomer, who, in recent times, was the first to restore the comets to their rank in creation. His observation on the comet of 1577, which he found had no sensible diurnal parallax, led him to place it among planetary bodies.

Passing over Kepler, Hevelius, Bernouilli, and others, we come to the illustrious Newton, who gave to the world, the true theory of comets, and confirmed the opinion of the philosopher Seneca. "As soon as he had discovered the laws of gravitation, he applied them to the determination of cometary motions; for, having proved, that according to the conditions of that force, a body might describe any conic section about the sun, he conceived, that those bodies, in their apparent irregular motions, might be governed by that principle. The comet of 1680, which approached the sun to within one sixth of his diameter, enabled him to test the truth of this conjecture; and he demonstrated that it moved in an elliptical orbit of so great eccentricity, that it could not be distinguished from a parabola having the sun as one of the foci; and that, as in the case of the planets, the areas described about the sun were proportional to the times. From this calculation, it became

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* Tycho Brahe maintained that the earth was the centre of the celestial motions, and supposed every comet to move in an arc of a great circle of the sphere. Borelli, in 1665, had conjectured the elliptic form of these orbits. Kepler had not recognized the analogy perceived by so many of his successors, and had contended that the trajectory of a comet was a right line. Hevelius followed the same ideas, but we must allow him the credit of having remarked, and indeed proved, that the rectilinear orbit was not rigorously accurate, but that there was a sensible deflection from it, so that the trajectory in fact approximated to the nature of a parabola. But Hevelius by no means admitted the permanent nature and return of comets, nor did he suppose as we do now, the visible arc to be that of an ellipse, which from its great eccentricity is sensibly identical with a parabola. The parabola, according to him, was the result of the deflection from a straight line, produced by the attraction of the sun: it does not appear clearly whether or not he meant to place the sun in the focus of the parabola. The honor of having first established the parabolic form of the orbit of a comet, the sun occupying the focus, is generally allowed to Dorfel, Minister of Plauen, in Upper Saxony, who showed that this was the case for the famous comet of 1680, and extended the proposition by induction to all comets. The work was published in 1681, and is extremely rare. Lib. Use. Knowl. Article, Astronomy, p. 99.

evident, that the comets were governed by the same laws as the planetary bodies, and that the orbits of the former differed from those of the latter in the great elongation of their elliptical paths."

We have hitherto confined our attention chiefly to the Greek and Roman philosophers, and before quitting the subject, we shall glance at a few facts, concerning the early knowledge of the oriental nations. And one of the first, that occurs to us, as worthy of notice, is one connected with the History of the celebrated Halley.

Dr. Halley states in an article, published in the Philosophical Transactions, during his time, and also in some of his other works, that he was led to discover a method of finding the longitude at sea, by what he had read in Geminus, Pliny, in Ptolemy and even in Suidas, of the properties ascribed by the Chaldeans to their astronomical *Saras*.

The Chaldean astronomers* held that the Sara, or, the period of 6585⅓ days, or a little more than 18 years, or the period of 223 lunations, gave the return of similar eclipses to the same place in the heavens, which supposed that the moon would be again exactly in the same point of its own ecliptic, and in the same situation with respect to the ecliptic of the sun. Dr. Halley examined this statement, and found that the moon went through all the varieties and irregularities which have been noticed by astronomers in the course of 223 lunations.

From this fact he inferred, that this period would likewise give the return of the conjunctions and approximations of the moon to the fixed stars themselves, without any other than what arose from the motion proper to the stars, which is known to be but a degree in the course of four *Saras*. These approximations being observed at sea, (which Halley judged a very possible thing) will give, by the difference between the hour set down in the tables, and that of the place of observation, the difference between the meridian of the observer, and that for which the tables have been drawn up.

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*A striking proof of the acquirements of the Chaldeans is to be found in their knowledge of the period of 6585⅓ days, in which the moon makes 223 revolutions with regard to the sun, 239 with regard to the apsides of her orbit, and 241 with regard to her nodes. The accuracy of this period is very great, and its utility no less in calculating the recurrence of eclipses.

Herschell's Hist. Astron.

We are informed by Simplicius, who gives Porphyry as his authority, that Callisthenes transmitted to Aristotle, a series of observations made at Babylon, during a period of 1903 years before the capture of that city by Alexander the Great.

Ptolemy gives from the works of Hipparchus, several observations of lunar eclipses, made at Babylon 720 years before Christ. Aristotle states that they had many occultations of the planets and fixed stars by the moon. This led them to conceive that eclipses of the sun were to be attributed to the same cause.

Hutton's Math. and Philos. Dict.

The irregularities of the lunar motions were known among the Greeks, as far back as Hipparchus and Ptolemy. Newton satisfactorily explained the great inequality of the moon, called the *variation*, and the existence of the annual equation, both of which had been discovered by Tycho Brahe.

The problem of finding the longitude at sea, says Hutton, was found to depend greatly upon the exactness with which the moon's place could be computed, and thus incited the lunar researches of several astronomers since the time of Newton. The problem to determine the motion of each one of a system of bodies,* when disturbed by all the rest, which formerly engaged much attention, is acknowledged to be beyond the power of the most refined analysis; but from the solution, which Clairaut obtained, he formed a complete set of Lunar Tables, which were more correct than any preceding; and the subsequent researches of Mayer and Euler on this subject, were rewarded respectively by the Boards of Longitude in England and France.

The great attention bestowed upon the theory of disturbing forces, brought the lunar theory to a high degree of perfection; the tables constructed by astronomers, giving the moon's place within half a minute. There yet remained one inequality in the moon's motion, for which the principle of gravitation seemed to afford no solution; this is what is known as the moon's acceleration. Various attempts were made to explain that phenomenon by Halley and others, but it was reserved for La Place to elucidate it, and to give the finishing touch to the theory of the moon, nearly a century after it had been propounded in the first edition of the Principia.

In continuation of Hutton's remarks, it may be added, that it was on a new examination of the theory of the moon on the principles of gravitation, that La Place ascertained the existence of an inequality hitherto unnoticed by the calculators of Lunar Tables, of a period of 184 years, and rather a complicated form, which

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*In reference to this problem, Mrs. Somerville remarks, that it is necessary to estimate the disturbing action of one planet at a time, whence the celebrated proposition of the three bodies, originally applied to the moon, the earth and the sun, namely, the masses being given of three bodies projected from three given points, with velocities given both in quantity and direction, and supposing the bodies to gravitate to one another with forces that are directly as their masses and inversely as the squares of the distances, to find the lines described by these bodies, and their positions at any given instant.

By this problem the motions of translation of all the celestial bodies are determined. It is an extremely difficult one, and would be infinitely more so, if the disturbing action were not very small when compared with the central force. As the disturbing influence of each body may be found separately, it is assumed that the action of the whole system, in disturbing any one planet, is equal to the sum of all the particular disturbances it experiences, on the general mechanical principle, that the sum of any number of small oscillations is nearly equal to their simultaneous and joint effect.

Connection of Phys. Sciences, p. 14.

explained all the discrepancies observed. This is a good example of the advantages derived to our tables from physical astronomy. Indeed to such perfection has this science been carried in the case of the moon, that M. Damoiseau has lately published tables, founded exclusively on theory, which are at least equal, if not superior, to any we possess.*

The second which we adduce is in relation to the discovery of the isochronism of the vibrations of the pendulum, which is attributed to Galileo, an Italian philosopher of the sixteenth century. But this property would have been of little use, had not Huygens, or some other person, found out a method of applying it in the construction of a clock. But Galileo and Riccioli, the latter of whom, Sturmius says, first pointed out, if we remember right, the equal oscillations of the pendulum in arcs of small dimension, were not the earliest individuals who applied this property as a measure of time. Edward Bernard, many years ago, published in the London Philosophical Transactions, a document, showing that the Arabian astronomers had used the isochronism of the pendulum for that purpose, but for the want of certain mechanical contrivances to render the discovery useful in common life, it was laid aside and forgotten.†

In closing our examples of ancient knowledge, we ought not to omit the Hindoos, from whose works, we have strong evidence for believing, that Algebra and Arithmetic were originally derived from India, inasmuch as those works contain rules and principles which denote a much more advanced and refined knowledge of the former subject than is to be found in Diophantus, the earliest Greek writer on Algebra, whose works have come down to us.

From the writings of Brahmegupta and Aschyra, and a dissertation on them by Colebrook, it is rendered certain, that the Hindoos, besides their algebraic and astronomical knowledge, were well acquainted with many of the most useful propositions in Geometry, such as that known as the 47th of Euclid,‡ which they

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* We might observe, that the method of lunar distances could never have come into general use without the invention of reflecting instruments. The first idea of these, is attributed to Hooke, the cotemporary of Newton. Hadley's quadrant is explained in most works on Optics. Godfrey of Philadelphia comes in for a claim to the invention of this instrument. Those who would wish to see more in reference to the claims of individuals on this topic, may consult Hutton's Math. and Philos. Dict., London Philo. Trans. for the year 1731, Montucla's History of Mathematics, and the first volume of the Philadelphia Philosophical Transactions.

† Freret.

‡ Invented by Pythagoras between 5 and 600 years before Christ. He had travelled in the East.—This proposition the Hindoos demonstrated in a very peculiar way, partaking more of the nature of algebraic reasoning than of pure geometry.

called the *Bridal Chair*, the theorems for determining the circumference and area of a circle, and Brahmegupta* has given the rule for determining the area of a triangle, in terms of its three sides. This has been thought to be of modern invention. In their algebraic calculations, they used both the roots of the quadratic equation, when occasion required, and were perfectly aware, that a square has always two roots, and that a negative quantity has no assignable square root. They were acquainted too, with what was of recent knowledge, even among the mathematicians of Europe, that a definite quantity divided by 0, gives an infinite quantity for the quotient. Independently of their knowledge of the common rules, now in use, exclusive of Cubic and Biquadratic equations, the Hindoos were acquainted with some branches of the science, which were not known in Europe till the latter part of the seventeenth and about the middle of the eighteenth century. They possessed a perfect theory of indeterminate equations of the first degree, and they had a very extensive knowledge of those of the second degree; both of which they resolved by methods that were successively invented in France and other parts of the continent by Meziriac, Fermat, Euler and La Grange.†

PART IV.

We have now closed the exemplifications to illustrate the proposition with which we commenced. We have brought under notice a few facts in relation to the knowledge of the ancients on some points of science, and have placed them, in brief contrast with the information possessed by the moderns, on the same subjects. We have neither entered minutely into the topics, nor preserved any connection between them. They may gratify, if nothing more, one of the ruling passions of human beings; and if we are not deceived, they will show that former ages were not as indifferent to the phenomena of nature, as is generally believed. We do not pretend to say, that their physical knowledge can be compared in extent and depth with that of the moderns; but it cannot be denied, that they exhibited much accurate observation and vast strength of intellect. It is true, that of some branches, we find among them scarcely the least indications of those com-

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* Brahmegupta lived about the end of the sixth century after Christ:—Aschyra, about 1150.

The Hindoos were acquainted with the common rule for proving multiplication and division, by casting out the nines; also with the rules for single and double Position.

†See Bonnycastle's Algebra, 2 vols. octavo edition, and Hutton's Mathematical Dictionary.

prehensive systems of the present day, and while this is allowed, it must be granted, that, of others, for example, the animal kingdom, the genuine principles of classification seem to be almost as well understood in the time of Aristotle, as they are now.*

Indeed, it is astonishing, when we look back to former ages, to see the accurate information which they possessed of natural science.† They have on this point been underrated. It was after the reformation by Luther, a common charge among writers, against Aristotle, Theophrastus, Pliny and others, in reference to their statements of natural effects, that they were either the dupes of superstitious credulity, or that they were deliberately given to gross impositions and fabrications. Subsequent ages, however, have confirmed many of their accounts, and have seen that many discoveries and opinions looked upon as new and original, are only enlargements or developments of those known centuries ago. What was long discredited of the burning mirror of Archimedes‡

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* Kidd's Physical Condition of Man.

† The knowledge which we at present possess of the phenomena of nature and of their connection, has not by any means been regularly progressive, as we might have expected, from the time when they first drew the attention of mankind. Without entering into the question touching the scientific acquirements of Eastern nations at a remote period, it is certain that some among the early Greeks were in possession of several truths, however acquired, connected with the economy of nature, which were afterwards suffered to fall into neglect and oblivion.

Life of Galileo, Cab. Lib.

‡ Archimedes of Syracuse extended the bounds of Geometry in every direction, but especially where it treats of curvilinear figures and solids. He made a near approximation to the proportion that the circumference of a circle bears to its diameter, and gave the first example of exactly determining the area of a curve by proving that of a parabola equal to two thirds of the circumscribed parallelogram. He proved that the paraboloid is equal to half and the sphere to two-thirds of its containing cylinder, on the last of which discoveries, he prided himself so much, that he directed the figures of a sphere and a cylinder to be sculptured on his tomb. If he was great as a geometer, he was to the full as eminent as a mechanician. Before his time, mechanics and hydrostatics could hardly be deemed to exist as sciences; he established both on sure grounds, and enriched them with many valuable discoveries. He struck out the idea of a centre of gravity, and used it very ingeniously in determining the conditions of equilibrium in solid bodies. He first laid down the principle, that a body plunged in a fluid loses weight equal to that of the fluid it displaces; showed how to ascertain the specific gravities of substances; and solved many curious problems respecting the equilibrium of bodies in a fluid.

He was no less distinguished as a *practical* mechanic, though many of his most admirable inventions perished with him, through a prejudice he had adopted from the Pythagoreans and Platonists, who deemed it beneath the dignity of a philosopher to keep any record of *such contrivances*, or to treat them as aught but *matters of recreation*, in the intervals of his search for abstract truth. He is said to have suggested the power that is gained by the combination of pullies. But his greatest triumph was the defence of Syracuse, when besieged by the Roman army under Marcellus. The city was taken by surprise, and Archimedes was slain, contrary to the wish and order of the Roman leader.

Hist. Greece, Lib. Use. Knowl.

has been verified in modern times by the celebrated Buffon.* Mechanics, and the arts affected by mechanics, offer many similar circumstances. The wonderful machines invented by that same philosopher;—the gallies of from twenty to forty oars, the working of which is still a problem to be solved; the conchoides of the geometrician, Nicomedes, which Frances Blondel has transferred to architecture, are all instances of the vast genius of the ancients, and their skill in the practical application of mathematical knowledge to mechanical philosophy.†

It must be acknowledged, that in order to form an opinion of the condition and extent of science among the ancients, it is necessary to gather the scattered fragments which are found in the works of Stobæus, Plutarch, Plato, and many others. The entire labors of the old philosophers are not here to speak for themselves; and we are, therefore, unacquainted with their more elaborate opinions, their mode of experimenting, or how they arrived at their physical conclusions. Their systems, such as we have them, are to us, like those ancient statues of which only fragments remain, and of which we cannot again make a whole, without those parts that are deficient. We owe the same justice to the philosophers of remote ages as to the ancient sculptors. We ought to judge of the parts that are lost, by those which are preserved, and to conclude that they answered to each other, and that when put together, they made up a whole, that was at least not monstrous.‡

The truth is, that the moderns for a long period of time, have been verging into the belief of their absolute superiority over the ancients in matters of mind and physical philosophy. In relation to the latter, it must be conceded, that they are in advance. It is difficult, however, to keep the due medium of opinion, and from a boundless veneration, a few centuries ago, towards them, mankind have passed to the opposite extreme. But in forming this estimation of ourselves, we have forgotten that in our march onward to truth, we have been lighted by the genius and inventions of the Greeks, the Romans, the Arabians, the Egyptians and Chaldeans. We have hoarded and amassed, but do not seem willing to allow credit to the sources whence we have drawn. But we cannot too highly appreciate the inventive energies of the ancients—their

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* M. Buffon made a variety of very powerful burning glasses, both as mirrors and lenses; and at length concluded with one which is probably of the same nature with that of Archimedes. It consisted of 400 mirrors reflecting their rays all to one point; with it he could melt lead and tin at the distance of 210 feet.—See Hutton's Math. and Phil. Dictionary; Buffon's History Nat. Suppl. vol. 1; or, Montucla's History of Mathematics, vol. 1.

† Freret.

‡ Freret.

vast intellectual powers. Were it not for the genius of old, would those of modern times be so skilled in astronomy, geometry and algebra, had not Meton, Eudoxus, Hipparchus, Euclid, Archimedes, Diophantus, and many others, laid the foundation of those sciences, and methodized the scattered fragments? Argue as we may, it was more difficult, and worthy of higher glory to bring astronomy to the degree of perfection in which it was at the time of Hipparchus,* than it was to carry it farther afterwards, by means of telescopic instruments.† We are too much prejudiced in our own favor. We are influenced, deeply too, by the same feeling, when we speak of their moral and metaphysical writings, because we think more justly upon certain points, as the unity of God, the immortality of the soul, etc. But this is doing them injustice, and we attribute to our *genius*, the glory of that knowledge which is exclusively owing to christian revelation.‡ Christianity alone has made us superior to them in matters of this kind. The superiority of the moderns arises from the multiplicity of their knowledge; from the concentration of all that is valuable which has been bequeathed to them by those who have preceded them; in the close attention to every thing that passes around them, and in the ardor with which they prosecute *every* department of literature and science.

In conclusion then, may we not say, in the language of an elegant writer, that the scattered facts which we every where find, ought not to be regarded as the highest efforts of the ancients in science, or, as results which they had reached without the light of theory or without the aid of long continued observation. When the traveller contemplates the remains of ancient cities, and examines the broken statues, the shafts, and capitals and pediments which are dug from their ruins, does he consider these fragments as the highest efforts of the sculptor and the architect in the arts which they cultivated? Does he not rather turn in imagination to the columns and the statues which they composed, to the temples which they supported or adorned, and to the living beings that worshipped within their walls?

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* Hipparchus has been called the father of astronomy. He surpassed all his predecessors, and has been equalled by few of his successors, perhaps by none except Kepler and Bradley. Only one of the least important of his works is left, and from it, we learn that he was then in possession of a method for the resolution of spherical triangles. As no traces of the science of Spherical Trigonometry is found in any preceding author, Delambre concludes, that Hipparchus was the inventor of it. But though the works of this great man are lost, with this exception, yet we can ascertain very nearly the extent and nature of his discoveries from the great Syntaxis of Ptolemy. Herschell's Astron.

† Freret.

‡ Freret.

Errata.—Page 409—article, "The Past and the Present," 5th line from the top, for 366¼ days, read 365¼ days.—Two or three typographical errors, of little consequence, escaped notice.

FEMALE EDUCATION.*

NO. II.

One of the greatest pleasures of life is conversation;—and the pleasures of conversation are of course enhanced by every increase of knowledge: not that we should meet together to talk of alkalies and angles, or to add to our stock of history and philology—though a little of all these things is no bad ingredient in conversation: but, let the subject be what it may, there is always a prodigious difference between the conversation of those who have been well educated, and of those who have not enjoyed this advantage. Education gives fecundity of thought, copiousness of illustration, quickness, vigor, fancy, words, images and illustrations;—it decorates every common thing, and gives the power of trifling, without being undignified and absurd. The subjects themselves may not be wanted, upon which the talents of an educated man have been exercised; but there is always a demand for those talents which his education has rendered strong and quick. Now, really nothing can be farther from our intention than to say any thing rude and unpleasant; but we must be excused for observing, that it is not now a very common thing to be interested by the variety and extent of female knowledge, but it is a very common thing to lament, that the finest faculties in the world have been confined to trifles utterly unworthy of their richness and their strength.

One of the most agreeable consequences of knowledge, is the respect and importance which it communicates to old age. Men rise in character often as they increase in years;—they are venerable from what they have acquired, and pleasing from what they can impart. If they outlive their faculties, the mere frame itself is respected for what it once contained; but women (such is their unfortunate style of education) hazard every thing upon one cast of the die;—when youth is gone, all is gone. No human creature gives his admiration for nothing: either the eye must be charmed, or the understanding gratified. A woman must talk wisely or look well. Every human being must put up with the coldest civility, who has neither the charms of youth nor the wisdom of age. Neither is there the slightest commiseration for decayed

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* Abridged from Ed. Re.—Concluded from p. 447, Academician.

accomplishments:—no man mourns over the *fragments of a dancer*, or drops a tear on the relics of *musical skill*. They are flowers destined to perish; but the decay of great talents is always the subject of solemn pity; and, even when their last memorial is over, their ruins and vestiges are regarded with pious affection.

There is no connection between the ignorance in which women are kept, and the preservation of moral and religious principle; and yet certainly there is, in the minds of some timid and respectable persons, a vague, indefinite dread of knowledge, as if it were capable of producing these effects. It might almost be supposed, from the dread which the propagation of knowledge has excited, that there was some great secret which was to be kept in impenetrable obscurity,—that all moral rules were a species of delusion and imposture, the detection of which, by the improvement of the understanding, would be attended with the most fatal consequences to all, and particularly to women. If we could possibly understand what these great secrets were, we might perhaps be disposed to concur in their preservation; but, believing that all the salutary rules which are imposed on women are the result of true wisdom, and productive of the greatest happiness, we cannot understand how they are to become less sensible of this truth in proportion as their power of discovering truth in general is increased, and the habit of viewing questions with accuracy and comprehension established by education. There are men, indeed, who are always exclaiming against every species of power, because it is connected with danger; their dread of abuses is so much stronger than their admiration of uses, that they would cheerfully give up the use of fire, gunpowder, and printing, to be freed from robbers, incendiaries, and libels. It is true, that every increase of knowledge may possibly render depravity more depraved, as well as it may increase the strength of virtue. It is in itself only power; and its value depends on its application. But, trust to the natural love of good where there is no temptation to be bad—it operates no where more forcibly than in education. No man, whether he be tutor, guardian, or friend, contents himself with infusing the mere ability to acquire; but, giving the power, he gives with it a taste for the wise and rational exercise of that power; so that an educated person is not only one with stronger and better faculties than others, but with a more useful propensity—a disposition better cultivated—and associations of a higher and more important class.

In short, and to recapitulate the main points upon which we have insisted.—*Why the disproportion in knowledge between the two sexes should be so great, when the inequality in natural talents is so small; or why the understanding of women should be lavished upon trifles, when nature has made it capable of higher and better things,* we profess ourselves not

able to understand. The affectation charged upon female knowledge is best cured by making that knowledge more general: and the economy devolved upon women is best secured by the ruin, disgrace, and inconvenience which proceed from neglecting it. For the care of children, nature has made a direct and powerful provision; and the gentleness and elegance of women are the natural consequence of that desire to please, which is productive of the greatest part of civilization and refinement, and which rests upon a foundation too deep to be shaken by any such modifications in education as we have proposed. If you educate women to attend to dignified and important subjects, you are multiplying beyond measure, the chances of human improvement, by preparing and *medicating* those early impressions, which always come from the mother; and which, in a great majority of instances, are quite decisive of character and genius. Nor is it only in the business of education that women would influence the destiny of men;—if women knew more, men must learn more,—for ignorance would then be shameful—and it would become the fashion to be instructed. The instruction of women improves the stock of national talents, and employs more minds for the instruction and amusement of the world;—it increases the pleasures of society, by multiplying the topics upon which the two sexes take a common interest;—and makes marriage an intercourse of understanding as well as of affection, by giving dignity and importance to the female character. The education of women favors public morals; it provides for every season of life, as well as for the brightest and the best; and leaves a woman when she is stricken by the hand of time, not as she now is, destitute of every thing, and neglected by all; but with the full power and the splendid attractions of knowledge,—diffusing the elegant pleasures of polite literature and receiving the just homage of learned and accomplished men.

Weak, wicked and *vain* men have always taken a great deal of pains to *lower the female sex*, and to represent them as incapable of real virtue and solid excellence. It is easy to see their scope. Even some authors of great name among the profligate, have endeavored to confirm the degradation of female dignity. The attempt when successful, often becomes to both sexes, the cause of poverty, disease, shame, remorse, suicide, and of every other evil with which God has thought proper to visit voluntary and continued transgression of those laws which were first written on the heart, and then in the Scriptures; *the laws of moral and relative duty.*

The *women* indeed may become the *best reformers.* The dignity of female virtue, consistently supported, is better calculated than any moral lesson, to strike confusion and awe into the breast of the *empty and artful villain.*—Educate, then, women well.

PROCEEDINGS

OF THE

COLLEGE OF PROFESSIONAL TEACHERS.

PART. I.

MINUTES.

Cincinnati, O., Monday, Oct. 2d, 1837.

The "*Western Literary Institute and College of Professional Teachers,*" commenced its seventh annual meeting, in the Methodist Episcopal Church, at 9 o'clock, A. M.

The President, Albert Picket, Sen., assisted by Vice President M. G. Williams, of Ohio, called the house to order; and after Prayer by the Rev. B. P. Aydelott, the Constitution and extracts from the Minutes of last meeting were read by the Recording Secretary.

D. L. Talbott, from the Executive Committee, submitted a code of By-Laws, which were accepted, and after some amendment, adopted.

Samuel Lewis Esq. introduced Rev. D Pierce, superintendent of Public Instruction for Michigan, to the College, and upon motion, he was invited to take a seat as a member of the Convention.

The report of the Executive Committee was read and accepted.

It was *Resolved*, on a motion, by J. L. Talbott, that so much of the report of the Executive Committee as relates to the finances of the College, be referred to a committee of three members, to report thereon as early as practicable.

Committee of Finance, { J. L. Talbott, Samuel Lewis, O. L. Leonard.

On motion of Dr. Ray, it was

Resolved, That so much of the report of the Local Executive Committee as relates to "The Western Academician" and the publication of the future transactions of this College, be referred to a committee of three, to report thereon as soon as possible.

Publishing Committee, { B. P. Aydelott, D. L. Talbott, A. Kinmont.

It was *Resolved*, on motion by J. L. Talbott, that the reading of reports be the order of the day at 10 o'clock A. M. and at 3 P. M.; and that it be the duty of the Committee of Arrangements to announce the same in the assembly, and through the daily papers.

The College then adjourned to hear the Introductory Address.

At 11 o'clock, Rev. S. W. Lynd addressed the citizens and members of the college, upon "the moral influence of reward, in a system of education founded upon the Word of God." Rev. Martin Ruter officiated as chaplain.

At 3 o'clock P. M., the deliberations of the College were opened by prayer by Rev. Mr. Woodruff.

President Picket, being unable, through indisposition, to deliver his address, D. L. Talbott, by request, read it.

J. L. Talbott moved a resolution, "that gentlemen attending the Convention, who are not eligible to membership, be invited to take part in all deliberations, discussions," etc., which was adopted.

Mr. Maylin introduced the following preamble and resolution, which was adopted.

"Whereas, in President Picket's address, reference is made to the public schools in this city; and whereas, all educational facts are important to the College,

"*Resolved*, That the Board of Trustees now present, be invited to furnish information on that subject."

Whereupon, the President of the Board being absent, Dr. Wood reported verbally.

Dr. Aydelott, of the Committee of Publication, submitted a report, which was accepted, and the financial part of it referred to the Committee of Finance.

The College then adjourned.

At 7 o'clock P. M. the College again convened,—prayer by Rev. D. Pierce.—After which,

Samuel Lewis Esq. delivered an address "on the expediency of making the course of instruction in common schools so ample and various, as to meet the wants of all classes of citizens."

A. Kinmont submitted a resolution, "that the system of public instruction should be so extended as to embrace the entire educational wants of the whole community." Whereupon an animated discussion took place, in which Messrs. Pierce, W. H. McGuffey, Kinmont, Campbell, Purcell, Stevens and Mansfield took part.

On motion, this resolution was made the order for to-morrow evening, after Prof. Stowe's address.

By resolution, the consideration of Mr. Lynd's discourse, delivered this morning, was made the order of the day for to-morrow at 3 o'clock P. M.

The College adjourned at 10 P. M.

A. H. McGuffey, *Recording Sec.*

Tuesday, Oct. 3d, 1837.

The College met at 9 o'clock A. M., and was organized by Prayer from Rev. J. L. Wilson.

Minutes of yesterday were read and approved.

On motion of D. L. Talbott, it was

Resolved, That a committee of five be appointed by the house, to nominate officers for the ensuing year; and that said committee have power to increase their number by the addition of one member from each State.

Committee of Nomination.
- D. L. Talbott,
- M. G. Williams,
- A. Kinmont,
- W. H. McGuffey,
- O. L. Leonard.

To which the committee added

Messrs. Scott, of Tennessee.
Campbell, of Virginia.
Thomson, of Indiana.
Pierce, of Michigan.

D. L. Talbott presented the following resolution, which was adopted.

Resolved, That a committee of one member from each State now represented in this Institution, be appointed to examine into the proceedings of the Executive Committee, in relation to the establishment of the "Western Academician," and to report on the character of said work, at as early an hour as practicable.

Committee of Examination.
- A. Campbell, of Virginia.
- O. L. Leonard, of Kentucky.
- D. L. Talbott, of Ohio.
- W. A. Scott, of Tennessee.
- S. H. Thomson, of Indiana.
- J. D. Pierce, of Michigan.

The list of committees appointed to report at the present session, was read, and the report on Infant Schools called for.

Rev. J. L. Wilson submitted said report, which was accepted.

John D. Pierce moved a resolution, "that *moral education* in distinction from *intellectual culture*, is an idea unfounded in fact, and of dangerous tendency," which was laid on the table.

The Treasurer, Thos. Maylin, submitted his report, which was accepted.

The College then took a recess.

At 11 o'clock A. M. the College convened. After Prayer by Rev. D. S. Burnet, Rev. Benjamin Huntoon delivered a lecture on "the importance of moral education, keeping pace with the progress of the mechanic arts."

After which the College adjourned until 3 P. M.

The College met in pursuance of adjournment.

Rev. W. A. Scott officiated as chaplain.

On motion of J. L. Talbott, the report of the Committee on Domestic Education was read by Rev. B. P. Aydelott.

On motion of Dr. Drake, it was accepted, and the discussion of it blended with the subject for debate before the house, by previous arrangement.

In the discussion which succeeded, Messrs. S. W. Lynd, Dan'l. Drake, J. P. Harrison, Lyman Beecher, Timothy Walker, and J. T. Brooks participated.

The subject was then laid on the table, and the Institute adjourned.

The College was organized at 7 P. M. by Prayer from Rev. J. T. Brooks.

Charles L. Telford read a Poem written for the occasion, by Mrs. Caroline Lee Hentz, of Florence, Alabama. After which,

Prof. Calvin E. Stowe delivered a lecture on "the Prussian System of Education."

The following resolution was then offered:

"*Resolved*, That a system of public instruction adapted to the wants of the Valley of the Mississippi, ought to include all the usual branches of an English and Scientific Education; and that a sufficient number of schools of that character ought to be provided in every township, co-extensive with the number and wants of the youth who belong to it."

Whereupon a debate succeeded, in which Messrs. J. P. Harrison, Walter Scott, S. V. Marshall, A. Kinmont, J. D. Pierce, C. E. Stowe, W. H. McGuffey, and S. Lewis, took part.

At 10 o'clock the College adjourned.

A. H. McGUFFEY, *Rec. Sec.*

Wednesday, Oct. 4th, 1837.

The Convention was organized at the usual hour.

After Prayer by Rev. A. Dennison, the Minutes of yesterday's session were read and adopted.

A. Campbell, on behalf of the Committee on Examinations, submitted a report, approving the course of the Executive Committee in establishing the "Western Academician," and recommending the work to the patronage of the College, which was accepted and laid on the table.

Mr. Eckstein read a report on Linear Drawing, which was also accepted.

The hour having arrived for reading the report on "the expediency of introducing selections from the Bible instead of the Bible *itself* into our schools," J. B. Purcell, the chairman of the Committee, after some introductory remarks, submitted his report, which was laid on the table, and immediately succeeded by a coun-

ter report by B. P. Aydelott; after which, both reports were accepted.

Rev. Benjamin Huntoon offered a resolution, which after much discussion, and sundry amendments, was adopted as follows, by an unanimous vote.

Resolved, That this Convention earnestly recommend the use of the Bible in all our schools, to be read as a religious exercise, without denominational or sectarian comment, and that it is the deliberate conviction of this College, that the Bible may be so introduced in perfect consistency with religious freedom, and without offence to the peculiar tenets of any christian sect.

The Institute then adjourned.

The College again assembled at 3 P. M., and after Prayer by Rev. Moses Hinckle, E. D. Mansfield, Esq. read a report on "the introduction of the study of Criminal and Constitutional Law, into our Literary Institutions," which was adopted.

The College adopted the following resolution, offered by the same committee.

Resolved, That the Elements of Government, as developed in the American Constitution, ought to be a permanent study in American Schools, Academies and Colleges.

A. Campbell, on behalf of the committee on that subject, submitted a report "on the practicability and importance of creating departments in our State Governments, having the subject of public instruction under their immediate supervision," which was accepted and adopted together with the following resolution.

Resolved, That we approve of a Department of Education in the several States of the Union, and recommend to those States of the Western Valley in which it is not already done, to establish such a department.

Samuel Lewis, Esq., Superintendent of Common Schools for Ohio, requested that the Minutes of the Convention might show that he is not prepared to recommend so much of the report just read, as relates to Normal Schools, his opinion not being made up on that subject.

On motion of A. Kinmont,

Resolved, That separate copies of the report,(when printed with the proceedings) be struck off, and transmitted to the Governors of the several Western States.

The College adjourned.

At 7 P. M. the Institute was again organized, and after Prayer by Rev. Mr. Brooks, of Illinois, S. Eells, Esq. delivered an address on "the dignity of the office of a professional teacher."

The following resolution was adopted, after remarks from Messrs. Lyman Beecher, E. D. Mansfield, Nathaniel Wright, S. V. Marshall, W. H. McGuffey and others.

Resolved, That to procure a profession of Teachers, adequate to the wants of popular education, we must educate, reward and honor them, more amply than has yet been done in the United States.

At 10 o'clock the College adjourned.

A. H. McGUFFEY, *Secretary.*

Thursday, October 5th, 1837.

The Institute was called to order at the customary hour. Rev. W. A. Holliday officiated as chaplain.

After the reading and adoption of the Minutes, the following resolution, proposed by D. L. Talbott, was passed.

Resolved, That a committee of six be appointed by the chair, to select and submit subjects of report for the next annual meeting.

Committee on Subjects for Reports,
- A. KINMONT,
- A. CAMPBELL,
- W. H. McGUFFEY,
- W. A. SCOTT,
- J. F. C. SALOMON,
- JOHN D. PIERCE.

The following resolution, offered by Mr. Stevens, was laid on the table, for future discussion.

Resolved, That in the opinion of this College, the establishment of Seminaries, designed especially for the training of Teachers, is one important practicable means of increasing the supply, and improving the qualifications of Teachers, and that the incidental influence of such seminaries, would be highly favorable to all the interests of the great cause of Education.

A. Campbell, on behalf of the Board of Directory, submitted several amendments to the Constitution, which were adopted.*

W. H. McGuffey moved the following resolutions, which were adopted.

Resolved, 1st. That the address of Samuel Lewis, delivered on the evening of the 2d inst. be accepted in place of the report due from him on that subject.

2d. That it is the deliberate opinion of this body that legislative provision is indispensable, in order to secure general education, in the several States in this Valley.

3d. That while the freest and fullest scope should be given to individual and associated efforts, a system of public instruction, sufficient to meet the wants of the entire population, should provide for teaching the usual branches of an English and Scientific education; and that public schools of the different grades ought to be provided for that purpose, to an extent sufficient to supply the

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* See the Revised Constitution.

existing and accruing deficiencies, under such regulations as the legislatures in the respective States deem best adapted to effect the object.

Dr. Drake offered the following resolutions, which were laid on the table, to be discussed this evening, immediately after the lecture.

Resolved, 1st. That we regard emulation or love of comparative excellence, as a fundamental principle of the human mind, implanted in it for valuable purposes, and never injurious to the character of the individual, except when the moral and social principles are not cultivated so as adequately to restrain it.

2d. That the practice of distinguishing comparative merit in our Literary Institutions, is proper; but that in this merit should be included, as far as possible, *diligence*, *justice*, *generosity*, and *general propriety of conduct*.

3d. That it is only when *mere scholarship* is rewarded, that it generates vanity, pride, or improper ambition.

4th. That rewards should not be awarded in *money*, but in certificates of honor, books and other memorials, calculated to inspire a love of knowledge and virtue.

Rev. John D. Pierce of Michigan, delivered at 11 o'clock, a lecture on the proposition that "a correct knowledge of human nature is essential to successful teaching."

The report of the committee on "the best means of early mental culture" succeeded, and after reading, was adopted.

The Institute then adjourned.

At 3 P. M. the College was re-organized, and after Prayer by Rev. B. Dickinson, the Committee on Finance submitted a report, which was accepted, and agreeably to its suggestion, a committee was appointed to receive subscriptions this evening, and that Dr. Drake be requested to present the subject to the audience.

Committee.
- D. L. Talbott,
- M. G. Williams,
- E. P. Langdon,
- A. H. McGuffey,
- Thomas J. Matthews,
- Asa Drury.

The resolutions offered by Messrs. A. Campbell and J. L. Talbott, relative to the future publication of the transactions of this Institute, were, on motion, referred to a committee to report thereon in detail, to-morrow morning.

Committee.
- D. L. Talbott,
- M. G. Williams,
- W. H. McGuffey.

Dr. Drake submitted a preamble and resolution relative to the powers of the Executive Committee, which were laid on the table.

The committee on the nomination of officers, reported the following ticket, which was unanimously adopted, viz:

ALBERT PICKET, Sen. President.
DAVID L. TALBOTT, Corresponding Secretary.
ALEXANDER H. MCGUFFEY, Recording Secretary.
THOMAS MAYLIN, Treasurer.
ISAAC VAN EATON, Librarian.

Kentucky.

P. S. Fall, *Vice President;* O. L. Leonard, S. V. Marshall, F. A. Goddard, V. V. Baldwin, G. A. Elder, *Directors.*

Ohio.

M. G. Williams, *Vice President;* A. Kinmont, W. H. McGuffey, J. Ray, J. L. Talbott, S. H. Montgomery, *Directors.*

Indiana.

J. H. Harney, *Vice President;* H. McGuffey, A. Wylie, E. O. Hovey, L. H. Parker, J. L. Holman, *Directors.*

Illinois.

J. M. Peck, *Vice President;* E. Beecher, T. M. Post, Theoren Baldwin, H. D. Towne, Cyrus Edwards, *Directors.*

Missouri.

W. S. Potts, *Vice President;* John H. Fielding, A. Patterson, H. Wilcox, J. L. Vandoren, *Directors.*

Michigan.

Rev. John D. Pierce, *Vice President;* H. Schoolcraft, —— Wilson, Rev. Prince, Prof. Merrill, Prof. Fasquille, *Directors.*

Pennsylvania.

Prof. Kennedy, Robert Fulton, Rev. H. Lee, —— Stone, *Dir's.*

Virginia.

A. Campbell, *Vice President;* B. Richardson, J. Hoge, W. Nelson, J. C. Campbell, —— Polsey, *Directors.*

Tennessee.

Philip Lindsley, *Vice President;* E. Slack, George Weller, N. Cross, Rev. — Estabrook, Rev. W. A. Scott, *Directors.*

Georgia.

A. Church, *Vice Pres't.* W. Clayton, *Director.*

Mississippi.

E. N. Elliott, *Vice President;* J. Lane, S. A. Cartwright, J. F. Foute, B. Chase, Dr. Picket, *Directors.*

Louisiana.

James Shannon, *Vice President;* Seth Lewis, R. W. Walker, Samuel Hurd, J. A. Ronaldson, J. Parker, *Directors.*

Alabama.

Robert Payne, *Vice President;* C. Richardson, E. R. Olcott, J. Test, J. W. Gulick, Daniel P. Bestor, *Directors.*

South Carolina.

Rev. J. Adams, *Vice President;* H. L. Brange, A. Smith, Dr. Geddings, Pres. Barnwell, *Directors.*

O. M. Mitchell, on behalf of the committee on that subject, submitted a resolution on "the importance of Civil Engineering, as a branch of collegiate education," which was accepted.

Delegates from the Teachers' Convention of Campbell county, Ky., presented their credentials, and took their seats as members of the Institute.

Dr. Drake's preamble and resolutions, which had, by previous motion, been laid on the table, were now taken up, and after some amendment and discussion, adopted, as follow:—

Whereas, in the preparation of discourses and reports, many gentlemen residing in different places, and therefore ignorant of each other's views, will necessarily fall into the same train of reasoning, and illustrate by similar or identical methods, the same principles; and whereas it is useful to the members and visitors of this convention, that many things generally known and acknowledged, should be reiterated orally, when the printing of them would not be attended with corresponding effects; and whereas the great cause of Education is deeply interested in the character of the transactions which this College may from time to time put forth: Therefore,

Resolved, 1st. That the committee of publication, in selecting for publication from the accumulated mass of discourses and reports, take such (as far as possible) as present new facts, discuss new principles, combat prevailing errors by new arguments, or aim at deciding, by new or more successful methods, such questions as remain unsettled: *Provided always*, that when any discourse or report is omitted, the author shall have the right of appeal to the College.

Resolved, 2d. That in discharging this duty, said committee shall have full authority, and are hereby required, to strike out from such of the discourses and reports aforesaid, as in their judgment it is not expedient to publish entire, such parts of them as they think ought to be omitted: *Provided always*, that if their respective authors will not consent to the omission, nor make such modifications as may be required, they shall remain in the archives (the copy-right being in the author) as manuscripts for future reference: Provided further, that in all cases, every author who feels aggrieved, shall be entitled to an appeal to the College.

At half past 5 the Institute adjourned.

At 7 P. M. after prayer by Samuel Lewis, Dr. Wm. Wood delivered an address on "the influence of education on the physical development of man."

Dr. Drake's resolutions relative to emulation, were next taken up, and after the Institute had heard remarks upon them from Messrs. J. Stevens, J. P. Harrison, A. Campbell, J. T. Brooks, A. Kinmont and E. D. Mansfield, they were laid over until to-morrow evening.

College adjourned.

62 A. H. McGUFFEY, *Rec. Sec.*

Friday, October 7, 1837.

The College met, as usual, at 9 A. M. Rev. J. Toy acted as chaplain.

A report was read by the committee appointed on the resolutions relative to the future publications of the College, which was accepted, and the conditions of the report adopted by the Institute.

The committee on "Vocal Music as a branch of common school education," read a report, which was accepted.

L. Harding offered the following resolution, which after remarks from several gentlemen, was adopted.

Resolved, as the settled sentiment of this convention, that the capacity for vocal music is common to mankind, and that vocal music may be employed to great advantage, as a means of discipline, of health, and of intellectual and moral advancement; and ought to be made part of the daily course of instruction, in all our common schools, as well as higher seminaries.

Institute adjourned.

At 3 P. M. Rev. Walter Scott addressed the meeting.

After the close of the Lecture, the following resolution was moved by A. Kinmont, and adopted by the College.

Resolved, That the system and views of Education disclosed by the lecturer, be referred to a committee of two, to report thereon at the next annual meeting.

Committee, { A. KINMONT, / W. H. McGUFFEY.

Also, *Resolved*, That hereafter, no report shall occupy more than *thirty minutes*, and no address more than *one hour*, in reading, without the consent of the Executive Committee.

College adjourned.

Seven o'clock, P. M.—The College assembled, and after prayer by the Rev. J. B. Cook, John P. Foote, Esq. delivered an address relative to the "Mechanics' Institute of this city."

J. L. Talbott then offered the following resolution, which was passed.

Resolved, That Institutions for mutual instruction, such as Lyceums, Mechanics' Institutes, etc. ought to be encouraged, to supply the wants of Education not yet met by the general system of schools and colleges.

On motion of A. Campbell, it was

Resolved, That the "Western Academician" be made the organ of this Institution, and that it be recommended to the community as worthy of patronage.

Dr. Drake's resolutions relative to "Emulation" were then taken up, and after Wm. Nixon had offered some amendatory resolutions, a discussion succeeded, in which the following gentlemen participated, viz. Wm. Nixon, O. Chester, E. D. Mansfield, A. Campbell, J. B. Purcell, W. F. Thomas, Lyman Beecher, Timo-

thy Walker, W. H. McGuffey, and Daniel Drake. The resolutions were then laid on the table.

The College adjourned at 11 o'clock, P. M.

A. H. McGUFFEY, *Secretary.*

Saturday, October 7th, 1837.

The Convention was organized at the customary hour. After prayer by the Rev. B. P. Aydelott, the Minutes of yesterday's session were read and accepted.

On motion of D. L. Talbott, it was

Resolved, That Dr. Beecher be requested to furnish a copy of his remarks, made last evening, relative to the Mechanics' Institute, and that the Directors of that Institution have permission, should they desire it, of publishing an extra number of copies of Mr. Foote's address.

A communication from Rev. J. Fishback was read by the Corresponding Secretary, and also a letter from Mrs. Julia L. Dumont, accompanying an essay "on the inducements to adopt teaching as a profession for life," which was ordered to be read immediately preceding the Valedictory.

Reports were then called for.

The committee on "the best method of diffusing Education in the South-Western States and Territories," submitted a report, which was accepted.

Dr. Aydelott, in behalf of the committee on that subject, submitted a report "on the mutual relation of Trustees and Faculties in Literary Institutions, and the peculiar province, rights and duties of each," which was accepted.

On motion, *Resolved,* That the resolutions offered by Dr. Drake, and those proposed as amendments by Wm. Nixon, on the subject of "Emulation," be referred to a committee of *seven*, of whom the President shall be one, to report on that subject at the next annual meeting.

Committee.
- A. Picket,
- Lyman Beecher,
- J. B. Purcell,
- B. P. Aydelott,
- W. H. McGuffey,
- C. E. Stowe,
- Daniel Drake.

The committee appointed to select subjects for reports for the next annual meeting, submitted the following, which were accepted, and committees raised to report thereon, viz:

1. On the effects of a multiplication of Universities in the Western States, on the higher branches of Literature and Science.

Committee—John D. Pierce, Michigan.

2. On the principles of English pronunciation, as taught and practised in different parts of the country.

Committee—O. CHESTER, Cincinnati.

3. To what extent the art and practice of self-government could be practically inculcated, in colleges, academies, and common schools.

Committee, { J. H. HARNEY, Indiana. / A. KINMONT, Cincinnati.

4. On the introduction of Gymnastic exercises into the American System of Education.

Committee, { J. C. F. SALOMON, Cincinnati. / WM. WOOD, Cincinnati.

5. On the causes which conspired in the revival of Literature.

Committee, { A. CAMPBELL, / R. RICHARDSON, } Virginia.

6. On the most efficient means of exercising and educating the moral sense of students.

Committee, { E. N. ELLIOTT, Mississippi. / N. CROSS, / G. WELLER, } Nashville.

7. On Physical Education.

Committee, { DANIEL DRAKE, / JOHN P. HARRISON, } Cincinnati.

8. On a philosophical classification of all Science, with reference to corresponding studies.

Committee, { PHILIP LINDSLEY, Nashville. / P. S. FALL, Frankfort.

9. On the influence of Sunday School instruction upon the pupils in common schools.

Committee—J. L. HOLMAN, Indiana.

10. On the present state of the Science of Arithmetic, as a branch of Education.

Committee—JOSEPH RAY, Cincinnati.

11. On the present state of the Science of English Grammar.

Committee, { JOHN S. WILLIAMS. / W. H. MCGUFFEY, Cincinnati.

12. On the present state of the History of the United States.

Committee, { E. D. MANSFIELD, / D. L. TALBOTT, } Cincinnati.

13. What influence is exerted upon private instruction, by chartered Institutions?

Committee—E. N. ELLIOTT, Mississippi.

14. How can the labors of the College be made available to the advancement and improvement of our common schools?

Committee, { C. E. STOWE, / P. S. SYMMES, } Cincinnati.

15. What are the effects on the progress and character of the learned professions in the West, of the defective preparatory edu-

cation of so large a proportion of those who are dedicated to these professions?

Committee, { Daniel Drake, E. D. Mansfield, C. E. Stowe, } Cincinnati.

16. On the present state of the Science of Geometry.
Committee—J. H. Harney, Indiana.

17. On Normal Schools.

Committee, { M. G. Williams, Springfield. B. Dickinson, John Stevens, } Cincinnati.

18. On Boarding Schools, their advantages and disadvantages.

Committee, { S. H. Montgomery, Cincinnati. G. H. Elder, Bardstown.

On motion of Dr. Drake, it was

Resolved, That the Executive Committee be respectfully desired, when making arrangements for the next meeting of the College, to assign a suitable part of the edifice to the *members*, and make provision for securing it exclusively to their use.

Resolved, further, That the thanks of this Institute be presented to the Trustees of the Wesleyan Chapel, for their kindness in granting the use of their edifice, for the meetings of the College.

Resolved, That the Executive Committee be requested to revise the code of By-Laws, and report the same at the next annual meeting.

The motion relative to the reading of Mrs. Dumont's Essay was re-considered, and it was ordered to be read at 11 o'clock, in order to give time to any member who might desire it, to express his opinions and feelings in regard to the session now about to close.

At 11 o'clock, D. L. Talbott read the Essay, which was succeeded by remarks from several gentlemen.

At 12 o'clock, Professor Stowe delivered the Valedictory;—after which, President Tomlinson of Ky., the Benediction.

The College adjourned to meet in the city of Cincinnati, on the first Monday in October next.

A. H. McGUFFEY, *Recording Secretary.*

CONSTITUTION

OF THE

WESTERN LITERARY INSTITUTE,

AND

COLLEGE OF PROFESSIONAL TEACHERS.

The Convention of Teachers assembled in Cincinnati, deeply impressed with the importance of organizing their profession in the Valley of the Mississippi, by a permanent association, in order to promote the sacred interests of Education so far as may be confided to their care, by collecting the distant members, advancing their mutual improvement, and elevating the profession to its just, intellectual, and moral influence on the community, do hereby resolve ourselves into a permanent body, to be governed by the following Constitution:

Article I.

1. This association shall be known by the name of "The Western Literary Institute, and College of Professional Teachers."

2. Its object shall be to promote, by every laudable means, the diffusion of knowledge in regard to Education, and especially by aiming at the elevation of the character of Teachers who shall have adopted Instruction as their regular profession.

Article II.

1. This association shall be composed of such Teachers of good literary and moral character, and delegates from such societies, for the promotion of education, as are now, and may hereafter be formed, and other persons who are actively engaged in promoting the cause of education, as may sign this Constitution, and pay to the Treasurer at the time, a fee of two dollars.

2. Any gentleman eligible to membership, by paying at one time the sum of ten dollars, shall become a member for life, and be exempt from any further assessment.

3. An annual assessment of one dollar shall be laid on each member (life-members excepted), an omission to pay which assessment for two years in succession, shall be considered a forfeiture of membership.

ARTICLE III.

1. The officers of this Society shall be a President, one Vice-President, and five Directors for each State represented in this Institute, a Corresponding Secretary, a Recording Secretary, a Librarian, and a Treasurer; all of whom shall form the Board of Directory, to be elected at the annual meeting, and serve until their successors be chosen.

2. The President shall preside at the meetings of the Society. In case of his absence, a Vice-President, or a President pro tempore, shall occupy the chair.

3. The Recording Secretary shall give notice of all meetings, keep a regular record of their proceedings, and have charge of the archives of the Society.

4. The Corresponding Secretary, subject to the Board of Directory, shall be the organ of communication with other Societies and individuals.

5. The Librarian shall have charge of the Library.

6. The Treasurer shall collect and receive all moneys due the Society, and pay them out at the order of the Directors; he shall keep a true account of all the receipts and disbursements, and make a report annually thereof, and oftener if required by the Directory.

7. The Board of Directors shall have the general management and supervision of the Society—with authority to devise and carry into effect such measures as will best advance its interests. They shall appoint competent persons to deliver the annual addresses and lectures, and recommend to the Society suitable persons to serve on standing committees. It shall be their duty to see that proper notice be given of the annual meeting, by the Recording Secretary, at least three months previous to the time of convening. They shall procure the annual addresses and lectures; they shall have the privilege of examining the reports of standing committees, and other communications to the College, and to publish such parts of all these documents as may in their opinion advance the cause of Education. They shall elect an Editor of their Journal; they shall appoint their own Chairman and Recorder, and annually exhibit their proceedings, and report thereon. They shall have power to appoint from their own number, a local standing Executive Committee, with full power during their recess, to discharge all the duties of the Board, and to fill all vacancies that may occur in their own body, during the year; of which committee, the two Secretaries shall always be members.

8. Each section of the Directory with its Vice-President, in the States represented in this Institution, shall have power to admit

associates of this body, and shall be charged with the interests of Education within their State, responsible to the general Institute for their proceedings, which they shall report to, at the annual meeting of this body; they shall have power to establish their own by-laws, not inconsistent with this Constitution.

Article IV.

1. The stated meetings of this Society shall be held annually on the first Monday in October, in such place as the majority of the Directors shall determine at the annual meeting.

2. Special meetings may be convened by order of the Directory, having previously given two months notice.

3. The Board of Directory shall hold their stated meetings during the sitting of the Institute, and shall have power to make rules for their government.

Article V.

1. By-Laws, in accordance with the Constitution, may be made at any meeting.

2. No alteration or amendment to this Constitution shall be made, unless recommended by the Board of Directory, and agreed to by a majority of the members present at an annual meeting.

PROCEEDINGS

OF THE

COLLEGE OF PROFESSIONAL TEACHERS.

PART. II.

DISCOURSES AND REPORTS ON EDUCATION.

1.—OPENING ADDRESS.

BY ALBERT PICKET, SEN., PRESIDENT.

The Seventh Annual Convention of the College of Teachers has arrived. From its origin, every year has seen it grow in numerical and intellectual strength. The West is beginning to feel deep interest in the cause of education,—a cause which ought not to know sectional feelings. It is a nation's concern, because a nation's welfare is at stake. The College of Teachers was instituted to aid in the great work of moral and intellectual culture. It has already diffused a healthy spirit of action among the people. Teachers have done here, what ought to have been done long ago in every part of the Union. Associations of a similar kind are springing up in the extensive regions of the West. Instructers as well as the community are receiving new light. Mind, hitherto torpid for the want of some point on which to act and to concentrate action, is moving with correctness and energy. In the outset of its march, all educational plans, so abundant in these days of experiment and innovation, should be thoroughly examined. Under a new impulse of mind, the imagination is apt to picture advantages, which the dictates of dispassionate reason will show to have no real existence. Education is a practical science; mere theory is of little use. Mind has its own laws; *they* are the work of *nature: theories* are human *schemes:* they are artificial. Education, to be successful, must be based on the knowledge of the physical, mental, and moral organization.

Next to religion, no subject is more interesting,—none more worthy of attention than education. Its object is the culture of

man's entire nature. He possesses all the faculties necessary to the end. Weak in the beginning, they gradually acquire strength and consistency by care, or shoot up wild and rugged under the force of existing circumstances. As it is the object of physical discipline to impart to the human system, beauty and vigor, so it is the object of moral and intellectual, to set the mind and heart right, that on all occasions they may act in accordance with their divine origin.

Of all agents, Education is the most powerful in developing man's nature: Yet no science is so imperfectly comprehended, and none that claims so universally to be understood. Writings eloquent, abound upon this subject. Defects are pointed out, and remedies are tried. But when perfection is thought to be attained, latent evils show themselves when least expected, and the labor of reform has to be commenced anew. But what christian, what philosopher, what friend of the human race,—because difficulties arise,—because the storm sweeps away the foundation, will not labor to re-build the work with *greater strength and beauty?*

Moral and intellectual light never beamed so broadly upon the human family as now. We have every thing to hope;—much to achieve. The human mind is waking gradually throughout the civilized world, to the interests of literature, science, and religion. The present age differs from all that have preceded it. Universal knowledge and constitutional governments were themes unknown in remote ages. Philosophy then dwelt on high. She was considered too sacred to be approached, but by the favored few. The mechanic and the tradesman were precluded from the Lyceum where Aristotle taught, and the academy of Plato was not invaded by their footsteps. But the empire of learning is opening to all conditions of life;—a mighty mustering of intellect is taking place. Genius and virtue, wealth and dignity are uniting in societies for the diffusion of knowledge and correct morals; and, the maxim is becoming universal, that eminence of national and individual character must be laid in solid literature and pure morality.

We live in a wonderful age;—in a country upon which the eye of the enlightened world is fixed. Our government has no parallel. Ancient republics were, and modern monarchies are, but the mockeries of human rights. We stand alone; no nation can be called upon to give us light. It received existence from wisdom, purity and action, which seem to have come down from heaven; it must depend upon these for its continuance. No nation has ever been called upon so expressly as this, to make man proud of himself, *as man.* The story of our doings will descend to future ages. If we remain free, we must be vigilant and active. Education, broad, sound and correct, is the price of liberty.

The consideration of what kind of knowledge and the proper means by which the right kind can be acquired, is one of high

moment. But whatever the education may be which the people receive, let it never be forgotten, that to enlighten the mind, and leave neglected the heart, is to do but a small part of the great work; and to give vigor to vice to the overthrow of virtue. Governments are safe, while the hearts of the people and their rulers are sound. The liberties of Rome were not destroyed by the ambition of Cæsar; the people had become slaves to their venal passions, before he became master of their rights and persons.

Our political institutions have no exemplar,—no archetype: and we are trying the experiment which no nation ever tried, of throwing the government into the hands of the people. It is an experiment which must prove eminently successful, or fearfully disastrous. The result will depend on the intelligence and virtue of the people. We cannot, then, make education too good; nor can we have too much of it. The will of the majority is for good or for evil. It is our law-maker, or our law-breaker. And it is by the father's fire-side and in the school-room, where that will begins its first developments; *there* are laid the foundation of national and individual greatness or destruction. *There* early instructions are received, which become the centre and life of subsequent action of heart and mind. The fear of the bayonet may put down the mob, till the mob become strong enough to put down the law. And when it has achieved this, it will turn its suicidal hand upon itself.

We require, then, all that parents can do; all that schools and colleges can do, to train the young to the sternest principles of virtue; to the highest efforts of intellectual energy. But the majority, under any circumstances, must be limited in intelligence. The stronger, therefore, the reason, that profound knowledge should be extended to as many as possible, so that by intermixture in society with those of circumscribed acquisitions—their knowledge may become diffused—their habits of investigation, and their integrity by such intercourse, be worked into the minds of the mass, and become a part of their thoughts and mode of action. The attainments of well balanced minds exert great influence over those less fortunate, and the greater the number of the well-educated, the wider will be the reach of sound reasoning and correct principles of conduct,

The distinction between the means and the end is a vital consideration. The parental roof, pecuniary aid, literary instruction, academic institutions are but means. These may exist; and yet the character of society still be imperfect. Education itself is but a means of achieving an end; and that end is the moral and intellectual perfection of man.

The great sources, whence the character of individuals is formed, may be considered under three general heads;—1st, in relation to parents; 2d, to the books read at home and at school, in

reference to mental and moral discipline; 3d, to the character and scope of literary Institutions. Upon each of these, we shall make a few remarks.

1st. In relation to parents:—No expression is more frequently used by them, than, that, they are anxious to give their children a good education; it is the only fortune which they will be able to leave them. The sincerity of the declaration cannot admit of a doubt. But what do they mean by a good education? Does it consist in reading, writing, and arithmetic? or, in knowing a few problems in astronomy? or, in a knowledge of a few places upon the surface of the earth? or, in dancing, or music? Unfortunately, in general, nothing more is meant,—and the highest gratification of most parents is to have it said, that their children have bright minds; that they are intellectual, and making laudable progress in learning. This merely intellectual education constitutes the *all in all* of their wishes. But we conceive, that this is an error of enormous magnitude. We hold that intellectual and moral education should go hand in hand; that they should never be separated; that they should commence together the moment the human being is capable of taking cognizance of things. It is on this rock, that the hopes of many an anxious parent are wrecked. High intellectual attainments may exist with great depravity of heart: so too, great moral excellence is often found in those whose powers of understanding are not, or, are but partially developed. Among the virtuous, there can be no doubt in their choice between enlargement of knowledge and corruptness of heart,—between circumscribed mind and moral integrity. The noblest heights, however, of moral excellence can only be obtained, where the mental energies have received the proper cultivation. Unless the judgment and reasoning powers are correctly disciplined, the decisions of the moral sense will often be wavering and wrong, and the consequences of actions be viewed through a false medium. "To neglect the culture of the mind, under the belief, that it is unnecessary to worth of character, is to act on a very incorrect principle. If the moral sense is fairly analysed, it will appear that it is, in part, founded upon the exercise of the intellectual powers, and that in a great variety of instances, it implies their operation. As long as we give the judgment the supremacy among them, and cultivate the rest with a view to it, we need not fear that we shall injure the moral culture of the mind."

Philanthropic and rational beings desire to see every individual happy, and each one is aiming to attain it through some channel which he has marked out for himself; and yet it is too often forgotten, that by the very constitution of our nature, happiness is made to depend more upon a proper regulation of the affections and dispositions than upon the most refined and exalted state of the intellectual powers. With the same integrity of heart, *he*

will be the happier being and more useful member of society, whose mind has received the proper cultivation. "Such a man is not liable to be ensnared by the follies and vices around him, and he will be best able to understand the evidence of important truths, which do not lie within the reach of mere sense, and he will best perceive their application, and how they are to be employed for the improvement of himself and others."

It is a mistake to suppose that the moral culture of the mind is of no consequence to its intellectual. The progress of the mind itself in literary and scientific knowledge, and still more in the development of its various faculties, depends much upon its dispositions. Well regulated affections afford powerful motives to use all the means necessary to enlarge and strengthen the understanding; as, on the other hand, ill-disciplined affections are positive hindrances in the way of solid intellectual advancement. Pride, self-gratification and obstinacy act as great drawbacks, even upon the progress of those who feel an inclination to enter into the fields of science, and above all, thwart the exertions of those who are endeavoring to promote their moral and intellectual interest. "But the discipline of the affections not only tends to bring into exercise the powers most important to the right conduct of life, but urges the mental in the choice of their pursuits." And it may be remarked, that Newton, Locke, Boyle, and many others, whose minds were under strict moral regulation, rank highest in physical and ethical science, and much of their power and comprehension may be attributed to the proper training of their affections. It has been observed by Miss Edgeworth, that some people have a notion, that the understanding and the heart are not to be educated at the same time; but the very reverse of this is true; neither can be brought to any perfection, unless both be cultivated together.

In moral we include religious education. All who acknowledge the authority of the Gospel, must know that religious principles and religious affections constitute an *essential part, if not all* of moral excellence. The principles of action which Christianity inculcates, give stability and refinement to human nature, and it cannot be denied, that they should hold in every parent's mind, a high place in the education of his children.—We believe in no moral codes founded on mere human reason. There is but *one true God, and one true Bible:* and if happiness here and hereafter is worth obtaining, let that *Bible be the guide of life;* let its words be struck deep into children's hearts.

These we hold, are strong and obvious considerations which ought to have due weight with all rational beings, and we think that "the mere man of the world must allow, that, parents who believe that they and their children are destined to exist in a future state, and that the habits and principles we form here, have a decided influence upon our condition here and in the world to come,

would act irrationally, if they did not use their utmost endeavors to give to their children such principles and habits as would secure to them here an approving conscience, and an interest in a future existence." We consider it, therefore, the solemn duty of every parent, while he urges his offspring forward in intellectual pursuits, not to neglect the cultivation of their moral affections.

We have said, it is a great error to cultivate the mind and neglect the heart. And yet, it is unfortunately the case, that mind claims the ascendancy in the thoughts and wishes of most parents. Why is this so? We ask the question of all; because *all* are concerned in the immeasurable extent of mind and soul daily coming into existence. Why is mind given, if it be not for great ends and glorious exaltation?—or, shall we adopt the degrading idea, that it is only a higher order of animal instinct which enables human beings to revel in vice in proportion to the quantity and intensity of its power? Rationality disclaims it; religion revolts at it. But is not the mass of mind educated, as if it were soon to flit into nothingness? Let the moral and intellectual condition of the world answer. Our sons are the sport of their passions, and our daughters,—those beings who exercise unbounded influence over the feelings and happiness of our sex, are too often taught to view themselves, not what God intended them to be, but as meteors, which glare for a moment on astonished vision;—as bright, as evanescent.

The great body of the people see there is something wrong. Hence the cry is raised, give us good education; give us able instructers. But here lies not the exclusive remedy. The error lies deeper than in incapable educators. We fear it lies much nearer home; in early life; in the initial training of children. But, when able teachers are found, do parents perform *their* duties? Do they firmly and energetically co-operate not only with the teachers, but between *themselves*, in order to stimulate intellectual exertion, and implant moral virtue in their children's minds? It is too apt to be the case, that the time and circumstances for doing these things, are neglected, and parents see, when it is too late, the pledges of their affection, walking in the broad road to destruction. All that can reasonably be hoped in such cases, is *reformation;* and the history of human life exhibits the sad fact, that where *depravity* has set its seal for any length of time, *reformation* is apt to come in the *form* only,of a death-bed repentance.

Do we say then, too much, when we assert, that the immense wreck of mind; of happiness; of the moral affections which we see on all sides;—the misery and degradation which stare us in the face,—are mostly owing to the mismanagement or neglect of human beings in the incipient stages of their existence. We think not. All who have lived to an extended period of years, and seen the world as it is—human life and action as they are;—know, as a

general result, that those who have been early and properly imbued with the great truths of that glorious legacy of God,—the Bible;—whose moral organization has been properly tempered while the intellectual received due attention, are better and happier, and more useful citizens than those who have been suffered to grow up under the action and indulgence of their wayward and violent passions. It is in vain to expect a growth of moral virtues and actions, unless care has been taken to *prepare the soil.* It is a mistake; an utter mistake, to suppose that *neglected* mind and heart will, of themselves, ripen into greatness and goodness. Give the young their own way, till manhood has stamped the full force of habit, and gratified sensualism has erased or weakened the counsels of the moral sense, and mark,—such youth:—such men are candidates for misery and public ignominy.

All know what sort of men spoiled children make. Dissolute in their manners, they soon squander what property their parents may have left them, in a manner useless to the community and destructive to themselves. This is a consequent result of lax attention to moral discipline. Were parents to take the proper advantage which nature intended, of the absolute dependence of their children on them in the first years of their lives, two great and useful consequences would follow, one a habit of submission to their authority; the other, that of submission to the laws of the social compact. The habit of submission to parental authority, leads to *self-government;* a habit more powerful over conduct than any code of laws. It is the surest guard over virtue. To prevent evil, we must commence aright; and strengthen the power of this self-authority in the outset of life. Without this, youth and manhood float on a sea filled with rocks and quicksands, and no beacon-light to guide them. But taught to yield to the decisions of conscience and reason, they are able to resist every temptation. No wealth;—no power;—no fame can compensate for depravity of heart, or, make it buoyant, while it is gnawed by the workings of guilt, and sees in every human countenance, the expression of its own degradation.

Without self-government;—without morals and a mind formed by solid knowledge, what is the career of those who claim, before they have arrived at the years of maturity, the prerogative of acting for themselves? Observe in answer, "the multitudes of beardless youth assuming the airs of manhood, and practising vices, to obtain a title to the appellation of men. The present age abounds with such examples. These are the unhappy objects of neglected moral training, and whom their friends allowed to go unrestrained. Their emaciated looks inform the spectator, that a secret canker has preyed on the flower of their youth. Their words, their deeds, their actions, all combine in proving, that they are far advanced in vice, and have been familiarly acquainted with its consequent miseries. The years which succeed a vain, a wick-

ed, and most wretched youth, are often spent in nursing a ruined fortune and a shattered constitution."

"A most fatal mistake is made by parents of all classes in the present age. Many of them seem to think vice and irregularity, the marks of genius and spirit in boys, and that innocence, modesty, submission to superiors, application to study, and every thing laudable, are the signs of stupidity. They often smile at the tricks of a vicious youth, and even seem pleased with boyish profligacy. It thence happens, that their children often prove a scourge to them, and that they feel that sting, which, to use Shakespeare's expression, is sharper than a serpent's tooth;—the sting inflicted by a thankless, an immoral, an ignorant, an extravagant, and an infidel child."

We come now to the second part of our remarks,—the character of the reading, to which the young give their attention. And we lay it down as a truth, that the reading taste of a community is but the reflected image of the books read and studied;—of the system of intellectual and moral discipline to which the mind has been subjected at home and at school. Those works, most in accordance with mental and moral habits, will be most eagerly sought and perused by those who are fond of reading. If mind has been educated properly; if it has been led to delight in substantial knowledge, it will not seek trifling books to pass away its leisure hours. It will not lay Bacon aside for Fielding; Johnson for James; Milton for Moore, the Bible for Volney.

If we estimate the state of education as it is, from its tendencies on minds and morals, and from the complexion of the general literature of the day, we think it will be allowed, that there is some radical error; some poison lurking which has been overlooked. All must know the cast of the great mass of volumes pouring daily from the press. With few exceptions, they are not *didactic;* they are not *calculated* to instruct, nor to bring man nearer to the perfection of which he is susceptible, and into closer alliance with his Creator. They are made to amuse and to sell; to corrupt taste and vitiate morals. Novels and romances and licentious poems find a ready sale. Publishers run little risk in bringing before the public, some fairy tale, or, the adventures of some miscreant;—some Eugene Aram or some fair Rosamond, drawn by some vigorous but tainted mind. This is well known and deeply regretted by those who desire to see a healthy and manly literature. The libraries of the young are filled with works of this class; they are their companions; and the hours which they ought to devote to serious reflection and the accumulation of solid materials for thought, are passed without benefit, in poring over pages, which, in many cases, are transcripts of the mere dreams of some wayward fancy. Public taste as well as sentiment, already feel the consequences of books addressed to the passions of our

animal nature. The writings of Bulwer, of Byron, of Moore, and their servile followers, have had their full weight upon the rising generation. We acknowledge the brightness of their genius and the energy of their writings; but, what avails the intellectual refinement received from these, or any other works of powerful intellect, if morals are corrupted through the same channels, and the best feelings of the heart are prostrated and paralyzed!—What then, can arrest the progress of such a literature? and the growing taste for that literature, which is every where manifest? Cannot manly and energetic education, at home and in the academic hall, be brought to bear upon this subject? If ever union of action was required to check an evil of great magnitude, it is upon this point, and at this time. No individuals, even in whom the moral feelings are blunted, were they to reflect, could stand silent and inactive, and see in their children, the seeds of vice budding, and receiving stimuli to their growth from improper sources. Mind is too sacred;—too god-like a gift, to be suffered to be turned loose upon its own wild energies, and by its contagious influence carry desolation into the immense mass of intellect destined to an immortality of happiness or misery.

It cannot be denied, that the character of the reading which occupies the attention of the mass of young people, is not of the right kind; and it cannot be doubted, that books may prove as fatal to purity of principle, as the company of the vicious and abandoned. Examples are too numerous not to be noticed by all. We see in the history of Revolutionary France, the effects of such writers as the Voltaires, the Rosseaus, the Volneys and the Diderots. It was licentious books; books of light reading; of fiction; of philosophic religion, that made France one vast charnel house; that prepared the way for the decree of the French Convention, that "Death was an eternal sleep;" that we perish and are forgotten like the brute creation!—The signs of our own times are portentous.—Heaven avert the blow from our young and happy country. No nation, if true to the cause of *Christianity and science*, ever raised upon itself the hand of destruction.

It concerns the national character, that a healthy and manly taste be cultivated; it concerns the national literature. If public taste be vitiated by the press,—the press must pander to its appetites. We must have a trifling and licentious literature. The songs of the Troubadours will be back upon us. Flagitious reasoning and sensual descriptions will usurp the place of every thing sound in philosophy and lovely in religion.

"It is no slander, but common-place truth to say, that this age is *not* an age of deep, strong, thorough thinking. Of profound study there is great impatience. Calm and solemn inquiry is rare. The mind of this generation is restive, feverish, impassioned, and consequently prone to reckless radicalism. The ven-

erable locks of antiquity, whitened with the frost of nearly six thousand winters, have been torn off by some ruthless hand, and childhood has been emboldened to say—go, thou art useless." And we attribute this condition of mind, to the most powerful of all moral agents now in full operation,—the nature and object of the education of the age. The cause and the effect are visibly associated.

It is a peculiar trait in the human character to leap from one extreme to another. Formerly, in order to obtain eminence in science, it was deemed requisite to labor long and constantly. It was judged too, that, if we desire to have sound public morals, deep attention must be given to human beings in the initial stages of life. But with the mass of people, these opinions seem to have lost their truth. And yet, the general shout is education;—give us light,—while the great source from which it is to come, is slightly noticed. But the shout must be vain, so long as education is laid on a narrow, weak and unsound foundation. The maxim, that labor is the price of knowledge, and virtue of happiness, is as true now as it was in the days of old. Opinions may change, but mental and moral laws, *never*. Minds, that look to lofty excellence, must do now what the minds of the illustrious dead have done in all ages,—study, think, investigate,—not occasionally, but constantly and intensely. But how is it, in this restless, ransacking age? The stern decisions of old time; of hoary headed wisdom, are too hard; too laborious. Ease and simplicity are the order of the day. Every science and every art must be measured by the square and line, and beyond their bounds, mind need not penetrate. Every thing must be brought down to the level of the most ordinary intellect; within the compass of a nut-shell. Science comes in the changing form of Proteus; it must be stripped of its difficulties; it must be popular. Mathematics must be brought down from its lofty pedestal, and made to prattle in the language of children. Abridgments and explanations and conversations without end, rise upon the labors of Euclid, Playfair, and La Place, and the physical sciences come in for their share of simplification and popularity. Old Euler, and Bonnycastle's Algebra must give place to those adapted in the language of authors, "to *young* ladies' intellect," and the clear reasoning of the Alexandrian Mathematician yield precedence to some child's Lessons in Geometry. In this mechanical age, as it has been called, the helps to learning are multiplying so fast, that it is to be feared, the young will abandon all efforts to help themselves. Those who know from experience, know well, how apt the mind is to take up with the *shadow* of the thing, instead of the thing itself. We need not books nor systems which are remotely, if not directly, calculated to foster that pernicious propensity more strongly. They render the mode of obtaining knowledge so easy, as to

reduce it to a mechanical instead of an intellectual employment. They are fatal to solid thought and to radical attainments.

It appears to us, that the present age is suffering its zeal in the cause of education to outstrip its judgment. The wisdom of bygone days seems to be of little weight. "But the study and experience of several thousand years have not been entirely in vain. They have developed facts and established principles in education, which must be practically recognized in all successful attempts to improve the human race. Hence, wise men are slow to embrace new doctrines, and are prompt to reject those subversive of well established principles; nor are they in haste to reduce theories to practice not well sustained by the experience of past time." And on no subject ought there to be exercised more caution and thought than upon the system of education in general use, and above all, when a national one is under consideration.

It is often asked, has not the present age an advantage over the ancients in the means of acquiring knowledge? And the inquiry is made in such a manner as to lead to the inference, that because the means exist, the merit of the age must at least be equal to that of any particular era of olden time. But there is a wide difference between the means and the actual result. What they wanted in these, they made up by steady, well directed labor. If we surpass them in physical science, they are at least equal to us in all that pertains to the training of the mind. It would, in truth, be strange, were we not their superiors in some respects, inasmuch, as we have before us, the knowledge which has been accumulating since the time the Chaldean astronomers formed the stars into constellations, and the Argonauts traversed the unknown waters of the Euxine. In moral excellence, too, they exhibit names of illustrious note, and if we surpass them in examples of this nature, it may be attributed to the *christian light* and expanded science under which we live.

If the ancients rose to eminence in matters of mind by constant application and the perusal of solid authors, it is no less true of the ages immediately subsequent upon the revival of learning. Books then were few, and difficult of access, but there were scholars, who, in the accuracy and extent of their knowledge, have not been equalled in any succeeding period. The conquests obtained in the regions of learning at that time, were obtained with difficulty; but a degree of force was acquired and exercised in the conflict which extended and secured the subjugated domain. In those days, there were no translations of the Greek and Roman writers; no short and royal roads to knowledge. The spirit which the study of the classics brought forth, extended itself to science. Genius without collateral helps and without tools, drawing upon its own resources, created new apparatus, and made new and glorious discoveries. Such were Copernicus and Galileo, Kepler

and Bacon: Such, too, were Newton, and Boyle, and Huygens, and our own Franklin, who, though they lived when books were more abundant, carried to their task the same spirit of laborious study and patient investigation. And this must be the case with every individual who looks to eminence in literary and scientific acquisitions.

Of what advantage, then, to youth, is the multitude of books, unless a judicious choice is made, and they are properly used? Of what use are Academical Institutions, unless the minds of students, pent up within, are subjected to a vigorous discipline, and nourished by a manly literature?—As one of the people, we wish to see a change come over the spirit of our Literary Institutions in these respects, and a total renovation in the general literature of the day.

With these remarks, we pass to the third division of our subject, the object of the higher places of academical learning. These we think, ought to combine the advantages of intellectual pursuits with practical science. It is in this field, that the present age differs from all that have preceded it.

Immediately subsequent upon the dark ages, it was the object of the nobles to keep the common people in ignorance, and of the monarch to keep both in subjection. Their united aim was to smother learning. When, however, it awoke from its long sleep, the first schools that arose were for the clergy; those for legal students soon followed, and these were ultimately extended to Letters which were confined to the privileged orders. The course of studies in these institutions was adapted to the condition of society; and, the great mass of the people was excluded from the means of acquiring knowledge. Universities and Colleges took their rise from these, and the course of studies intended for the foundation of the learned professions, has continued to the present day. Oxford and Cambridge, which date their origin from the middle ages, were the immediate models of the American Colleges and higher places of learning.

As admirable as the course of studies in the English and American Institutions of the higher order may be,—yet we conceive there is a very prominent defect in their object and organization. Their character is too exclusive, admitting no students, except they are properly prepared in classical literature, and rendering it compulsory to prosecute the Latin and Greek languages to a much greater extent. No separate departments exist, to which those seeking knowledge in any particular art or science can be admitted. If we consider, that the main support of our government lies in the solid knowledge of the people, it must be allowed, that this organization is inadequate to the end to be attained. It has followed, that a large portion of society has been cut off from the advantages of the higher pursuits in knowledge, and that there is

constantly kept up a wide chasm between professional men and the great body of the people. "An amazing extent of common sense and intellectual power, provided by nature for the development of the resources of our country, have thus been depressed in the pursuits of successful industry, and prevented from their full usefulness to the public welfare." This must be the case so long as colleges, with some few exceptions, remain constituted as they are, and our private academies and common schools confine their course of instruction to the barely necessary branches of knowledge. There is a vast and unoccupied space between the common school system and the college course, and the character of our government as well as the wants of the people, will ultimately render it requisite, that either the public and private schools raise their standard of literary and scientific study, or, the colleges organize on a plan that will admit students to the prosecution of any individual branch of learning.

The organization of colleges and higher schools ought to be of such a nature as to offer every advantage to those desirous of extending their knowledge in any one department. The nature of our government demands that every avenue to science and literature should be opened;—to the poor as well as the rich. On the continent of Europe, except in some states, while the *few* are admitted to walk at large in the fields of learning, the *many* are destined to remain uneducated and inactive. The idea of the adaptation of the arts and sciences to the improvement and happiness to the common people, has not yet taken a foot-hold in that region. "*They* have not the *middle* class which constitutes the great body of *our* society, and *we* have not the *two* extremes of the *high* and the *low*, which form the mass of theirs." If their present arrangements are favorable to their monarchial institutions, they are not those that are suited to the genius of our republic. We hold a rank incomparably pre-eminent in general intelligence and productive industry, and this is the distinguishing feature between them and us, and the natural result from the difference of their and our institutions.

The wants of our country seem to demand an organization of the higher places of learning, so that not only those designed for any of the learned professions, may prosecute the study of the Languages, Mathematics and Philosophy, but also those intended for merchants, architects, civil engineers, manufacturers, etc., may resort thither with equal privileges and equal advantages. We would have the intellectual and practical combined. But while we speak of Institutions, so arranged as to admit all conditions to an equal pursuit of the sciences, without especial and compulsory attention to the classics, let us not be understood, that we speak disparagingly, or think lightly of Greek and Roman literature, or, that the time employed in their acquisition, is time unprofitably spent. We mean nothing of the kind. "We esteem classical

learning as one of the most pure and elevating pursuits in which mind can be engaged. He who would imbibe a lofty spirit of generous and heroic virtue, a true and ardent love of civil and religious liberty; a refined taste; a well ordered intellect, and a free exercise of the combined graces and strength of oratorical language, let him drink deep and long at the fountain of Greek and Roman literature."

While we urge an organization of academical and collegiate Institutions on this plan, let not those of our own city be forgotten. Woodward and Cincinnati Colleges,* which sprung into existence through individual and public bounty, and have been warmed into vigor by the professional talent that superintends and directs them, were the first, or among the first, to lead the way in opening the doors of these sanctuaries of learning, so long closed upon the great body of the people. Nor must we forget our private and public schools; the former ranking in excellence and range of literary acquisition with those of the highest order in our country; and the latter, springing from the wisdom and generosity of the citizens, and directed by the efficient energy of patriotic trustees and directors, co-operating with judicious educators of their own choice, in advancing them still higher in *scope* and *merit*. As citizens of the West, we exult in the bright and growing prospect before us;—in the growth of a system of education unequalled in its object and bearing. What educator would not feel encouraged? What wonder that our Institutions of learning flourish, when we see such interest manifested, as we see this day, in this assembly, composed of the rich and the poor; the young and the old; the mechanic, the merchant, the physician, the lawyer, the divine, the educator, the Trustee and the Director of Schools, all united in a yearly jubilee to aid and accelerate, by their countenance and counsels, the great and sacred cause of Education.

But in all our efforts;—and under all organizations of schools and colleges, there is one object, which ought never to be lost sight of;—we mean the fear of God. "Our government and all our civil Institutions are founded on the Christian Religion. Intellectual and moral training mutually aid and should accompany each other. The principles of justice and rectitude in this life, are best implanted in the youthful mind by teaching it the great truth, that there is a day of accountability in the life to come, and before Him who sees our secret acts and knows our hidden thoughts. Fixed impressions from lessons of early piety and precepts of virtue aided by maternal affection, mingle in all the workings of the human heart, and amidst the pursuits, the strifes and seductions of the world, will become the guide and pole-star of actions in after life."

* Since our remarks were written, we are informed that several colleges in the West have recently organized on the plan above suggested. Among these, the Miami University at Oxford, well known to our citizens for its excellence, the South Hanover Institution, in Indiana, etc. We are very glad to see places of learning of this character, springing into existence.

THE MORAL INFLUENCE OF REWARDS, IN A SYSTEM OF EDUCATION, FOUNDED UPON THE DOCTRINE OF THE WORD OF GOD.

BY REV. S. W. LYND.

That great and excellent man, whom all regard as "*the Father of his country*," in his farewell address, expresses his conviction that religion is essential to the support of national morality and prosperity. He says—"Of all the dispositions and habits which lead to political prosperity, religion and morality are indispensable supports. In vain would that man claim the tribute of patriotism, who would labor to subvert these great pillars of human happiness, these firmest props of men and citizens. The mere politician, equally with the pious man, ought to respect and to cherish them. A volume could not trace all their connections with private and public felicity. Let it be simply asked, where is the security for property, for reputation, for life, if the sense of religious obligation desert the oaths which are the instruments of investigation in the courts of justice? And let us with caution indulge the supposition, that morality can be maintained without religion. Whatever may be conceded to the influence of refined education on minds of peculiar structure; reason and experience both forbid us to expect that national morality can prevail in exclusion of religious principle."

I presume that this whole assembly is prepared to adopt most cordially the sentiments of this distinguished man. The religion of the Bible is the great safe-guard of our political institutions. Let the principles of the Bible influence the mass of the community, and we shall continue to be a free, prosperous, and happy nation.

The chief design of the Bible is to form moral character, and to subserve the best interests of men through their entire existence. Its principles should therefore be connected with every system of mental improvement. They should be introduced into every place of instruction on the earth. No person should be considered properly educated, whose moral faculties have not been trained by these principles. Every feature of public instruction which is not conformed to them, should be abandoned.

It is not my design, however, to speak of the importance of the Bible in our halls of instruction. That was ably exhibited on a former occasion. I have selected as the subject of this introductory lecture—*the moral influence of rewards in a system of education, founded upon the doctrine of the Word of God.*

I use the term *reward* here in the obvious, ordinary sense, i. e. a *recompense for something good performed.* Not every thing good which we receive, can be called a reward. Suppose two men are desirous of obtaining an office, for which one is much better qualified than the other; and the place is awarded to him who is best qualified. The one who is selected receives a *benefit*, not a *reward.* Rewards and punishments always pre-suppose something that is voluntarily done well or ill.

I take it for granted that a system of rewards and punishments is necessary to efficient government. The laws of our physical organization involve such a system. He who regards these laws is rewarded by a healthy, sound action of the body, while he who puts them at defiance, is punished with sickness, pain, and an enfeebled constitution. Rewards and punishments are among the essential elements of a peaceful and prosperous community. They occupy an important place in the moral government of God.

The Bible clearly teaches the doctrine of reward. Moses chose rather to suffer affliction with the people of God, than to enjoy the pleasures of sin for a season. He considered reproach for Christ's sake greater riches than all the treasures of Egypt. The reason assigned is, that he had respect unto the recompense of *reward.* David declared, "Verily there is a *reward* for the righteous." Retribution was constantly held up by the prophets. "If ye be willing and obedient, ye shall eat the good of the land: but if ye refuse and rebel, ye shall be devoured by the sword: for the mouth of the Lord hath spoken it." Our Lord and his apostles constantly exhibited this principle in the divine government. Paul says, "He that cometh to God, must believe that he is, and that he is a *rewarder* of all them that diligently seek him."

But upon what principle does reward proceed in the Bible? It is uniformly the reward of *moral character.* Every man is to be finally judged according to this character. The reward of the believer is proportioned to his *faithfulness.* God never confers his promised blessings upon any person, according to the *talents* which he possesses, but according to the *moral* improvement of his talents. He does not say to any of his followers, "Well done, good and *successful,*" but "Well done, good and *faithful* servant." This position may be illustrated by two of the parables delivered by our Lord. In the one case, a rich man going into a distant country, committed to his servants different sums of money. To one, five talents; to another, two. When he returned and called them to an account, he found that they had made an *equal* improvement, each having doubled his deposit. The reward conferred on each was *equal.* His commendation of each was upon the principle of faithfulness. "Well done, good and *faithful* servant: thou hast been faithful over a few things, I will make thee ruler over many things: enter thou into the joy of

thy Lord." In the other case, a rich man departing for a distant land, committed an *equal* sum of money to each of ten servants, and commanded them to occupy till he returned. These servants made a *different improvement* of their capital. One gained ten pounds, and another five. They were therefore rewarded *differently*. One received authority over ten cities, and the other over five cities; but both were rewarded upon the principle of *faithfulness*. This is particularly stated in relation to the one who had gained ten pounds. "Well, thou good servant, because thou hast been *faithful* in a very little, have thou authority over ten cities." We may therefore regard it as an established principle in the divine government, that he will reward every man, not so much according to the talents he possesses, as according to his fidelity in improving them.

The wisdom of this system must be apparent to every reflecting mind. If reward were placed upon the foundation of talent, or of superior attainments resulting from superior talent, the mind would be diverted from the essential constituents of *moral* character, and would regard adventitious circumstances as forming the basis of divine favor. This would naturally excite the envy of the human heart against those whose talents were of a higher order. But when reward is based upon *moral merit*, there is no room for envy. Great talents in this case only increase the responsibility of the person who possesses them. They neither form moral character, nor change it: and a person of small talents will not on that account be undervalued. All may reach a high moral character, and a felicitous destiny, who faithfully improve the trust committed to their charge. The influence of this system is encouraging and animating. It is decidedly good in relation to the forming of character.

Now if it be granted that every system of instruction should have regard to the training of the moral faculties, to the formation of moral character, and that the principles of the Bible are the great principles by which this character is to be moulded,—then the system of reward which the Bible furnishes, should constitute an important feature in the education of youth. The moral influence of reward, founded upon the Word of God, should be brought to bear upon all our institutions of learning. Let me repeat the principle that the Bible uniformly teaches, *the reward of moral merit*. This is a point to which all our youth may arrive by industry and correct behavior; but they cannot all possess the same grade of intellect, or be equally successful in the acquirement of knowledge, during the hurried term of collegiate instruction.

Here our plans of education are generally defective. They found the distinction of merit upon *talent* and *acquirement*, instead of moral character. Through the whole course of academical and college studies, our youth are carried onward by the im-

pulse of ambition. It is a fair race for the superiority of fame, from the starting point to the goal, and reminds us of the Olympic games, as described by the apostle Paul. "Know ye not, that they which run in a race, run *all*, but *one* receiveth the prize?" Happy would it be for society, if this principle of reward were confined to athletic exercises! The medal for superior attainment adorns the breast of *one*. The first honor of the college pertains to *one*, and he, perhaps, the least moral of all. Could you look into the heart of that *one;* could you see the motions of the spirit in those who failed to grasp this honor; could you know the feelings of parents and friends on both sides, you would probably see one of the grand causes that originate and perpetuate the disorders of society. I cannot but regard the distinction founded upon mental superiority as one of the most ruinous instrumentalities ever devised.

But as this is a subject of no ordinary importance, and worthy of a thorough discussion, it will be necessary to be more definite in pointing out its evil consequences.

1. It overlooks the arrangements of Divine Providence.

The minds of some youth are not as easily developed as others. One of the most celebrated physicians and surgeons of modern times, after having completed his medical course under the most favorable circumstances, was regarded by his instructers and particular friends, as a man of very ordinary mind and attainments. He fell, in their estimation, below mediocrity, and it was supposed that he never could rise to any eminence in the medical world. More than once, if I am rightly informed, he was refused a degree. But nothing daunted, he went to Europe, and continued his studies in the best schools. Returning to his native country, he rose to a character in the medical profession, which it is the felicity of but few to attain. But examples are unnecessary to an observant community. The facts are all around us, confirming the position, that some minds are not as early developed as others. To create a distinction, therefore, by any system of reward, which exalts the inferior over the superior intellect, because of the more rapid development of the former, is to overlook the arrangements of Divine Providence, and erect our tribunal in opposition to that of the infinite God.

Some youth excel in the power of memory, whose ability to originate trains of thought is exceedingly limited. By this faculty they acquire an apparent triumph, in the course of their education, above minds of far more vigorous mould. They receive the honor which properly belongs to others, even upon the principle of rewarding intellectual merit.

In addition to this, many young persons have, perhaps constitutionally, a want of confidence in themselves. But from whatever source it arises, their efforts to communicate thought become

paralyzed, and, in many instances, the entire equilibrium of the mind is gone in an instant. Under these circumstances, the highest intellect cannot arrive at the reward of merit for superior attainment. This want of confidence may be conquered in after life by habitual practice in one sphere of operation, and by mingling considerably in society. Some, on the contrary, have a confidence, frequently only another name for impudence, which enables them to appear to greater advantage than others who possess more substantial knowledge. The reward which they receive is unjust, because it overlooks the arrangements of Divine Providence.

As far as my observation extends, the manner in which education is frequently conducted, has a tendency to perpetuate this error. All pupils are not equally quick in their perceptions; and this may arise not from a *want* of intellect, but from a wide and powerful range of mind which traverses connections and results, before it is prepared to grasp a given proposition. In the mean time, the student is hurried forward in his class. The teacher proceeds onward according to his own well trained and accumulated perceptions, taking it for granted, that all his pupils are prepared to follow him, when some of them are not yet perfectly settled upon the preparatory steps. I have heard lectures on Astronomy, Natural Philosophy, and other branches of science, delivered with great learning, which might as well have been uttered before a gallery of paintings as before a class of students, as to any permanent advantage which a class could derive from them. The number of honorable exceptions, however, is daily multiplying.

2. If this system of reward overlooks the arrangements of Divine Providence, it must have, to a considerable extent, a withering influence upon intellectual effort.

Let us suppose that the celebrated physician and surgeon to whose case I have referred, had suffered his mind to be influenced by his failure to obtain a degree at the time he expected it, what would have been its effect? In all probability, he never would have made another effort, and his invaluable services would have been lost to the world. Had he not been a man of uncommon firmness and perseverance, he would have yielded the point and sunk down under the conviction, that any further attempts would be useless. In nine cases out of ten, utter discouragement would have been the result. It is to be remembered, too, that the maturity of manhood was in his favor. Had he been a mere boy, it is probable, he never would have overcome the discouragement. But he labored with great perseverance, resolved to prostrate every interposing obstacle, and as he labored, a mighty intellect began to develop, and he became great in the midst of greatness. How many would have fallen where he rose.

Take a boy of his slow development of mind, and place before his ambition the reward of literary fame. Let him toil with ardor worthy of the highest honor, and fail in securing it, as the case supposes he will. Let the fact of his mental inferiority be made to stand out prominent in the distribution of commencement honors, so that he cannot possibly mistake the estimation in which his talents and proficiency are held by his instructers. Let this fact produce the impression upon his mind, that he is stupid, and it is not in human nature to resist discouragement. That bright gem which another system might have brought out, and polished, and which might have excited the admiration of a *world*, is destined to remain buried, till the unveiling of the mortal part displays its glory to the gaze of angels.

Take for another illustration a young man wanting in confidence. Through the whole course of his education, he labors under this difficulty. Every step of his progress upon the system of intellectual reward, has a tendency to convince him, that he can never attain to the elevation of others in the school or the college. What must be the effect upon his mind? What, but to increase his embarrassment, to paralyze his efforts, and to leave him, in conclusion, far in the rear of others. It is a fact not to be concealed, that a considerable number of college students make no effort to obtain the first honor. In schools, but few comparatively think of obtaining the medal. They perceive, at an early stage, that disappointment would be the result. It is certainly worthy of enquiry how far this may operate, in producing that indolence, and indifference to learning which characterize so many pupils.

In many instances the successful candidate himself will dwell with complacency upon his superiority of intellect, and, in future life, remit that industry and perseverance, without which the highest order of mind will ultimately become inefficient. What is the fact in a multitude of instances? Students have passed through their collegiate course with honor, and then have supposed that their education was finished. No one need be surprised at this, who considers the motive by which they were impelled to gain literary eminence. Inflated with pride and vanity, they have looked with contempt on those beneath them in attainment. Whereas, those who, during the same period, were not above mediocrity in their class, have, by diligence and perseverance, overtaken the former, passed far beyond them, and ultimately reached the highest point of human attainment. The reward of mental superiority is in the one case, *injurious*, and in the other, *unjust*.

Upon this system of reward, many young persons of fine mind have not a fair opportunity furnished them to gain the highest honors. The class is hurried forward before they are prepared in the understanding of first principles to accompany them with advantage. Now, some minds are so constituted, that, if they cannot

thoroughly comprehend every point as it is presented, they will not move onward at all. Their conviction is, that it is perfectly useless to make any effort in this rapid race for distinction. What must be the inevitable effect of this system upon their mental development and their moral character? It entirely perverts the great end of education, renders the place of instruction a hated place, and induces that indolence which attaches to so many pupils. I believe that in many instances, instead of punishing the *pupil* for idleness, want of perception, and dislike to the school, the *instructer* should be punished.

View this system in any light whatever, and it will be seen to have, in a great number of cases, a withering influence upon intellectual effort. One of our most respected teachers in this city informed me, when I named to him the subject of this lecture, that on one occasion he promised a reward to the most successful candidate in a particular branch of study. A little girl, a competitor in this contest, exerted all her strength, striving by incessant diligence and perseverance to secure the reward. She failad to succeed. What was the consequence? For a considerable time after this failure, she was one of the most trifling pupils in the school.

3. This system has a tendency to develop some of the worst passions of human nature.

It will be granted by all, that the most important season in human existence, in which lasting impressions may be made upon the mind, is the season of youth. This is just as true in relation to moral principle, as it is in reference to intellectual improvement. This season once past, and the mind, pre-occupied by false principles, will resist any system of moral government that comes in conflict with its uncontrolled inclinations. Should a teacher by any action, by any plan of reward, excite the very passions which the pupil has been taught to discipline by theory, what influence would it have upon the mind of the pupil? What effect would the principle of fearing God, taught every day, have upon the mind of a youth whose parent should excite him to fight a duel, under the promise of a high reward, if he succeeded in killing his antagonist? What if all the Trustees and officers of all the schools and colleges in the land should pass him a vote of thanks for the honorable deed?

If I understand the morality of the Bible, its design is to elevate the affections, to fix them upon proper objects, to perpetuate in the heart the love of God and man, and to discountenance every exercise of them which degrades, or which alienates man from man, and from his Maker. Hence doctrine, precept, example and *reward*, are all adapted in the Bible to the accomplishment of these ends. But of what use will it be to introduce into our schools and colleges, the morality of the Bible, as long as the prac-

tice of rewarding intellectual attainment continues? This system fosters *vanity, pride, ambition*, and *envy*.

It excites *vanity*, or that self-complacency which we feel in the consciousness of being superior to others. Add to this, a contempt for those whom we consider our inferiors, and it becomes *pride;* and pride necessarily grows out of this system. It cherishes in the soul, *ambition*, the desire to obtain and increase this superiority. Ambition leads to discontent and envy, and connected with these, it is the most reckless, corrupt principle of the human heart. It is the prime mover of rebellion against the government of God, afflicts its possessor with an unsatisfied craving fatal to happiness and virtue, and originates the most tremendous evils in society. The history of ambition is the history of *cruelty*, and *blood*, and *lamentation*, and *crushing empires*. The progressive character of ambition is too well known to need illustration before this assembly. It is a raging flame that spreads with inconceivable rapidity, until it becomes extinguished for want of fuel. It is the breeze, rising into the storm, and in the devastations of the tornado, concluding its course of wrath.

Nor are we to be informed, that the *candidate* for *literary distinction* may exercise a spirit of ambition without danger to society. Who collected the materials and kindled the flame which burst in successive conflagrations upon the kingdom of France in her revolution? Men, who, by the pride of literary eminence, set themselves above the Bible; invented a system of immorality, which they falsely called philosophy; unhinged the faith of the nation in the principles of the christian religion; and threw off the restraints of conscience and of the law of God.

The heart of man is full of ambition. It needs a course of moral training which shall control it to proper ends. But what is the influence of proposing reward to youth for rising superior to others in literary distinction? Is it not secretly and effectually cherishing a wrong spirit, a spirit of vanity, and pride, and ambition? And can it be wise, or moral, or religious, to uphold such a system?

This principle of reward excites *envy* in the breast of the pupil, which often becomes an abiding passion, and leads him on to every means to accomplish the ruin of his rival. Anger and fury soon exhaust themselves, because they are too violent to be lasting; but a life-time is too short to expend the resources of envy. How frequently has the candidate for intellectual honor felt as though he could annihilate his rival? Or, to say the least, how often has he wished him dead, that there might be no obstacle between him and the objeet of his ambition? A young man at college is resolved to obtain the first honor. He studies incessantly night and day. He prostrates his health in the enterprize. But the decision of the Faculty announces his failure. The honor is

conferred on a more successful rival. What are his views of the result? He believes that he deserved the honor, that partiality has operated to his prejudice, and that he has been unjustly treated. What are his feelings towards the faculty, and the successful candidate? We cannot even approximate the fact. And what is the issue as to his moral character? It has developed the strength of unholy passions, which not even death itself may eradicate, and which, but for this system, might have been efficiently disciplined and subdued. It is training the spirit to vice.

This system is opposed to the design of God in revealing himself to men. One prominent part of duty, as exhibited in the Bible, is to love our fellow creatures as ourselves, and thus to form a peaceful and holy community on earth. But this system tends to alienate man from man, as far as its influence goes.

It is important to distinguish between the *reward* of *intellectual superiority*, and the *approbation of intellectual effort.* The latter is connected with a moral influence upon character, the former leaves character out of sight. I will endeavor to illustrate my meaning. When Mr. West, who became one of the most distinguished painters of his age, was a little boy, he showed his mother a drawing which he had made. As an expression of her pleasure, she gave him a *kiss*, which greatly delighted him, and increased his desire to proceed with his little pictures, because his mother was so much pleased with them. He frequently observed to his friends in subsequent life—"*that this kiss made me a painter.*" That simple token of approbation kindled his desire to become a painter, while it tended to cherish a feeling of filial duty. But let us suppose that there had been a brother who made a similar effort, spent as long a time at the work, took equal pains, in short, *did the best he could*, and yet produced a very inferior drawing to that of his brother, and the mother had distinguished one by giving him a *kiss*, and the other by a cold indifferent look, what would have been the effect? Every one is prepared to say, that the mother would have adopted the best possible course to alienate the affections of her child from herself and from his brother. And can that which is wrong in parental government be right in the government of schools and colleges? Here is a case in which the inconsistence and error of intellectual reward, displays itself most glaringly and offensively.

The late Mr. Fuller remarks—"It is a distinguishing property of the Bible, that all its precepts aim directly at the heart. It never goes about to form the mere exterior of man. To merely external duties it is a stranger. It forms the lives of men no otherwise than by forming their dispositions. It never addresses itself to their vanity, selfishness, or any other corrupt propensity." But here is a system of reward that appeals directly to the

selfishness and vanity of the human heart. It tends to increase the influence of self-love, already too predominant.

I lay it down as a principle in morals, not to be controverted, that no motive which appeals to the selfishness, vanity, or pride of the human heart, can be *morally virtuous:* for, if it be morally virtuous, then *selfishness*, *vanity* and *pride* are *moral virtues.* This principle is fully sustained by the Bible, as has been shown in the quotation from Mr. Fuller. If, then, I have succeeded in proving, or if it is conceded, as I am persuaded it will be upon mature reflection, that the system of rewarding mental superiority furnishes a motive which directly appeals to these immoral propensities, my argument is established. Will any man at the present day, understanding these terms, maintain the affirmative, that selfishness, vanity, and pride are moral virtues? Will any one undertake to show that the Bible does address itself to these propensities as a motive to moral action? And will any one say that this system of reward does not appeal to these propensities? To what then does it appeal? To *humility?* or *meekness?* or *benevolence?* or, in short, *to any thing that can be regarded as a moral virtue?* No; the system is wrong, decidedly wrong, and ought to be abandoned.

It will be perceived that I treat this subject on the ground of high and holy principles; and whatever objection may arise upon the details, it cannot, in the least measure, affect the force of these principles. Every motive to excellence in every department, must be morally virtuous or morally vicious. There can be no motives which possess not the one or the other of these characters. If we urge young men to make high attainments in knowledge, that they may faithfully consecrate all their powers to the glory of God, and the good of mankind, we make an appeal to their sense of duty, and their obligations to God as their final judge. He has committed to them a mind which in all its developments must have respect primarily to these obligations. The faithful improvement of talent upon this principle is morally virtuous. The reward lies with their Maker. As far as we reward pupils for attention, diligence, faithfulness, and correct deportment, we employ *motive* that is *morally virtuous.* All young persons have it in their power to receive the reward, and if they do not, it is entirely their own fault. It condemns them on the same principle that God condemns them, their own conscience being witness.

But if we urge young persons to make high attainments in knowledge, that they may be superior to others, that they may occupy a high and honorable station in society, and excite them to this result, by rewarding intellectual superiority, the motive is not morally virtuous. No good can ultimately result from it. It rewards for distinctions which are of no account in the sight of heaven. It exalts the most successful, and depresses the one who

fails, where the failure is not from any fault of his own; and his conscience testifies that he is punished upon a false and unjust principle.

Whatever reputation may be awarded to knowledge, we should never lose sight of the fact, that the *moral character* is the most important part of all that pertains to man. This is connected immediately with his eternal interests; and it is the duty of every one in society to promote the eternal interests of his fellow man, as well as his own. The formation of moral character depends, in a great measure, as far as instrumentality is concerned, on the moral training received in the season of youth. While it is a solemn obligation resting upon every parent to give this training to his children, teachers are not divested of responsibility. In order to accomplish this end, the principles and motives of the Bible must be instilled into the mind; and especially the fundamental truth connected with the salvation of the soul through a mediator. In addition to this, vicious propensities are to be eradicated. Pride, envy, malice, vanity and kindred vices must be subdued in their first motions, or they will acquire vigor by indulgence. Let it also be observed, that *example* must harmonize with *precept*. Every course of instruction adopted, must embrace it as a friend and fellow laborer. It is found by experience, that when precept and example are at variance, the pupil inclines to the *example*. The most thorough induction into moral precepts may be rendered useless by exciting or cherishing the vicious propensities of youth. In this view of the subject, it is worthy of a serious consideration how far the system of rewarding pupils in a race for intellectual superiority, may influence their moral training.

The impressions which are made upon the minds of young persons are generally of a durable character. Every argument, therefore, that may be employed to exhibit the advantages of exciting youth to make high attainments in knowledge, by holding out the reward of intellectual superiority, is an argument in favor of forming *a vicious habit*. The motive presented becomes a ruling instrumentality. It becomes the main spring of action in subsequent life. In vain will you urge the politician, the lawyer, the physician, to attain to eminence upon the ground of being useful, on the principle of glorifying God. This has been no part of his early training. The food of his intellectual strength was an appeal to his vanity, his selfishness, his pride, his ambition. His character was formed under this influence. It has incorporated itself with his intellectual existence. Solomon says, "Train up a child in the way he should go, and when he is old he will not depart from it." But the reverse is equally true. Train up a child in the way *he should not go*, and when he is old, he will not depart from it.

4. We are not to suppose, that the influence of this system is limited to a few college students. It is approved and extensively practised. It is carried into families, and into the community. The influence is accumulating. It perverts the judgment in relation to the forming of right distinctions upon the subject of true merit.

What is more natural than that the youth who has been taught to employ all his resources for the purpose of gaining *literary fame*, should esteem this the highest point of all true eminence? You may give him precept upon precept to convince him that the formation of moral character is the most important part of his education; but how is it possible for him to believe it, when the very highest reward is appropriated to successful rivalship in knowledge? He does not believe a word of it. If he believes the *testimony*, he must abandon the *practice*. If he believes the teaching of the *practice*, he must despise the *precepts* of his instructers. It is not the *power* of *moral character* which he is taught to appreciate by this course, but the *power of knowledge*. And has not this idea pervaded the community at large? Is not this system calculated to foster the pride of intellect, and to give a prominency to learning which does not justly belong to it? Is it not adapted to promote an almost universal impression that will ultimately be our ruin as a nation, if God prevent not? What is more common, and yet, what is more indefinite, than the prevailing motto, "*knowledge is power?*" The influence of language, and especially the language of unmodified, confirmed maxims, in controlling the judgments of men, and imposing upon successive generations, is but little understood, even by the intelligent of the community. The bearing of that single oft-repeated motto, upon the whole circle of intellectual and moral enterprize, we shall probably never be able to appreciate. It is not hazarding much to say, that it has been associated in the minds of many with the idea of virtuous moral action. Hence, we are so frequently reminded, that the principal reason why the Grecian republic did not stand, was, because the power which knowledge confers upon its possessor, was not equalized among the whole mass of the body politic: and we are warned that the glories which now blaze around our free institutions, will go out in everlasting darkness, unless the great mass of the people be enlightened. It is admitted, that a healthful moral sentiment is usually associated with this public enlightening; but who does not perceive that it is merely *subordinate?* The grand, the controlling idea is the *power of knowledge*. No one who has made accurate observations can fail to perceive, that *popular intelligence* has been cherished as the principal bulwark of our political existence.

Knowledge throughout the mass of the community has an important place in the preservation of our free institutions; but how-

ever widely diffused, however accumulated, it is not the *most* important. Here lies the error. The maxim that, *knowledge is power*, has operated imperceptibly upon the minds of men, and so has the system of intellectual reward, until *education* has become the idol at whose shrine they worship. It reminds us of the uproar at Ephesus, when for the space of two hours, the people cried out—"*Great is Diana of the Ephesians.*" "*Knowledge is power,—knowledge is power,*"—has rolled over the earth as the voice of mighty thunderings. I grant that knowledge is power, but it may be power for *woe* as well as for *weal.* The greatest enemy to the happiness of the world is a being of *gigantic*, and *highly cultivated* intellect—a being of higher order than ourselves, but filled with almost infinite malevolence. What would be his terrific, destroying influence, were he *omniscient?*

We must change or modify our motto. We must abandon the system of reward for intellectual superiority. We must educate the noblest part of human nature, the *moral faculties;* educate them upon the principles of God's word, and abandon every system which infringes upon these principles, or tends to exalt the power of knowledge above that of moral character. Whenever the motives exhibited in the Bible become the main-springs of human action, then, and not till then, will society be purified, free institutions be rendered permanent, and knowledge contribute to the happiness of man. Let the controlling impression be formed in the mind, that *the Bible is power*, that *moral character is power:* let the principles of the Bible be laid at the foundation of the edifice of knowledge, and it will be an edifice which neither time nor revolution can undermine,—the glory of the nations, the joy of the whole earth.

THE EXPEDIENCY OF ADOPTING COMMON SCHOOL EDUCATION TO THE ENTIRE WANTS OF THE COMMUNITY.

BY SAMUEL LEWIS.

Fellow Laborers in the Cause of Education:—The constantly rolling wheel of Time has brought us together at another annual meeting, with another year's experience, and all the constantly increasing causes of encouragement to incite us to urge onward the great work that has caused our meeting.

But how changed is the prospect before us, and how much ground has been travelled over since we first met! Pardon me, if a moment is taken to contemplate it. You well know the doubts and fears that filled the minds and hearts of most of those who organized this institution;—how much there was to contend with; with what caution it was necessary to take every step;—how uncertain it was, whether public opinion would sustain the great cause of general education;—insomuch, that some even prophesied that the public would oppose, rather than favor the great project. Yet Providence has so overruled every influence, that the questions which at first were doubtful, are now settled;—public opinion, so much feared, has vindicated itself, and proved that it was better than the fears of the timid supposed it to be. It does not now remain to be discussed, whether common schools shall be regulated by the same rules, and possess the same advantages as our best private schools;—whether moral instruction is to be made a part of the system of education;—whether public opinion is in favor of general education; etc. etc.; these and other matters, that, in reference to this institution, may be called elementary, are now settled, and to meet the expectation of the public, we are now called upon to discuss the expediency of adapting common school instruction to the entire wants of the community.

This address is designed to take the place of a report that I was requested to prepare, "on the expediency of making the course of instruction in common schools so ample and various as to meet the wants of all classes of citizens." The subject is stated rather too indefinitely; and we take the liberty, therefore, of substituting public schools for common schools; and, without intending to limit the course practically, we shall consider the expediency of making the course of instruction in public schools sufficiently extensive to include all that is now taught in the best English schools; such as a thorough knowledge of the different branches of practi-

cal Mathematics, and enough of the Languages to prepare young men to enter college, including also the branches of female education peculiar to that sex, and moral instruction, or the proper cultivation of the affections. This course is more extensive than has been allowed to the greater part of our business or professional men; it will meet the entire wants of at least nineteen-twentieths of the community, and for present purposes, may be considered sufficiently general.

In order that this scheme may be expedient, it must be practicable; and it will be proper first to consider its practicability.

In all the Western States, public opinion gives tone to legislation. Legislation must provide public instruction for all; and to ensure such provision, the legislature must possess constitutional power, and be supported by the voice of the majority of the people. The question of power is settled in most of the States. Ohio, Michigan, Indiana, Missouri, Mississippi and Alabama, all have express provisions in their constitutions, requiring their legislatures to enact laws for the support and encouragement of education. Illinois is included in the territory over which the celebrated ordinance of 1787 extended, which makes the same provision: besides, she, as well as Kentucky, possesses a vast amount of school lands that must be made the subject of legislation; and both have exercised the power so frequently, that it may be considered as established in all the Western States.

The former being conceded, the question of public opinion next arises; for we state it as a maxim, admitted in all its force, that it would be worse than useless to attempt the passage and enforcement of a law, however salutary, against public sentiment. It may be difficult to fix on any rule by which to determine how popular this cause is, with the great democracy of numbers; but so far as any known rule can be brought to bear affirmatively, it will be found favorable. There is, indeed, in many places, an apathy, and in some instances pervading whole States, that at first view, would seem to contradict this assertion; but on a closer observation, it will be found that the apathy exists more on account of a general agreement of opinion in favor of the principle, than from any considerable opposition to it. For some years it was thought by good men, that the whole labor of making public provision for education must rest on a few enlightened philanthropists, and that public opinion was adverse to it. This sentiment seemed to paralyze the energies of our public men. More recently, however, several of the States, of which Pennsylvania deserves to be particularly mentioned, have broken ground, and ventured to present to the people more enlarged plans. To these, no man of any considerable influence, either public or private, was avowedly opposed, so far as he was concerned; but many trembled, lest it would alarm the public, and expose the whole system to popular opposition.

But we venture the assertion, that the most popular legislative enactments on this subject, have been those that have gone the farthest in elevating and perfecting the system. Nor do we believe that aspirants to popular favor in any of the middle or western States, would venture to come before the people, as opposed to what we generally call public or common schools. Much difference of opinion, we know, exists as to the details of systems; but on the general proposition, we here state, that with a very general acquaintance in one State, and with many persons in other States, and after travelling more than eight hundred miles in the current year, expressly on this business, and conversing with men of all classes in almost every situation of life, in such a manner as to get at the sentiments of those with whom we conversed, we have found but a single man opposed to public and general provision for education. Public opinion, then, is in favor of the measure, and the legislative bodies possess the necessary constitutional power;—so far then, it is practicable. But one other, and as great if not greater difficulty exists, viz: the showing how such a measure can be put into practical operation. It will be found that little or no actual difficulty need exist in the city or country, in regulating and supporting common schools under the present systems in some States, with slight modifications.

The plan of small districts obtains in Ohio, and most probably will in all the States where the territory is divided into ranges and townships. Each township of six miles square, is made a corporate town; and for convenience, attends to its own business in this as in other matters. In some other States, each town forms a district, which is sub-divided into what is called sub-districts. Now the custom is, to make these districts or sub-districts small enough to require but one, or at most, two teachers. This brings a school-house in the western country, where the lands are all fit for cultivation, convenient for all the neighbors; so that in hardly any case with the townships tolerably settled, will the scholar be required to walk more than a mile, or a mile and a half, and in most cases much less than a mile; for, allowing a school-house in the centre of each two miles square, there would be but nine in a township, and this would bring nine-tenths within less than a mile; whereas, in many cases, there are from twelve to fifteen districts in a township, and for convenience, there must be always as many as nine. But to sustain a school in each of these districts, competent to furnish all the instruction that I have named, would be unnecssarily expensive. A school or schools in each, competent to furnish reading, writing, geography, grammar and arithmetic, and the peculiar branches of female education, would meet the requirements of four-fifths of the people in the district, and this much must, under the present systems, so far as States have adopted systems, be provided, as fast as proper organization can be produced. On the

question, whether these districts or common schools shall be provided so as to meet and supply the wants of all the children that will avail themselves thereof, there can be but one answer. I need not make an argument to prove a point not disputed.

The district schools in this State, in some shape, furnish three-fourths of all the instruction in the State. But there are in almost every district, more or less of those, who wish to prosecute their studies farther, and must either go from home, or forego their wishes altogether. There must, then, be some other arrangements; and in order to meet the wants of these individuals, we must establish a school of a higher order in each township; it may be called a township high-school, or by any other name. Taking the six miles square, and establishing near the centre, this institution, you bring two-thirds of all the youth within less than two miles of it, and, with the exception of perhaps, in some townships, three or four families, the whole number is within less than three miles—the average walk perhaps a mile and a half. And let it be borne in mind, that the youth, before they go to this department, will have attained the age of from 10 to 18 years, and be fully able to take the walk; but if the distance be an objection, so arrange it as to have a high-school within every four or five miles square, though the centre of each township would seem the most natural and appropriate situation. This plan would be practicable in every township, where a majority of the voters desiring it, should, by vote, raise the proper funds; and this arrangement would meet the entire wants of the people, according to the definition I have given. The expense would form no objection; for, let it be borne in mind, that it is admitted on all hands, that the districts are to be supplied according to this plan. The additional expense would be, first, the building of the central school-house, or academy, or high-school, or whatever you please to call it; and this item could almost always be raised by subscription, as also the lot for that purpose. But if it were not raised by subscription, (which is certainly not the most equal method,) a very light tax would meet the expense. After the building is erected, as many teachers must be employed, as would be required to teach all who seek admittance, provided they have first passed an examination, and are found sufficiently instructed in those branches that are taught in the district schools.

I have thus, I think, shown how it may be practicable to provide this public instruction for district and high-schools; and shall endeavor to show the advantages, as arguments in favor of the proposed scheme.

1. This will, in fact, place the means of education sufficiently within the reach of every child in the several States; no one then, need be destitute of education, sufficient at least, to make him useful.

2. It will have the effect of developing an immense amount of native talent, of great use to the country, but which would otherwise remain unknown and unused; and while large sums are annually expended to develop the hidden treasures that lie in the bowels of the earth, is it less worth a nation's pride to devote some share of attention to those means that will bring to view, and animate into life those vast and unlimited powers of mind, which lie buried in all our townships, unconscious of their own energies? Who can tell how many philosophers, astronomers, chemists and eminent men, in all the different sciences, would be found in the next generation of our farmers, mechanics, and of all other professions and occupations, and to what high state of improvement all the agricultural as well as mechanical and scientific occupations and professions would be carried, if those are thus educated, who are to fill them?

3. It will be an immense saving of expense. The common district schools being, as we said, provided, the citizens of every township will have more or less private academies to furnish the proper amount of learning required for the learned professions, or for entering college; and these private schools do now in some townships, and must finally in all, cost more than to have a good institution, with sufficient rooms and teachers. We have not time to exhibit the calculations in dollars and cents; or we could prove this point by arithmetic.

4. Such a public school would possess advantages over a private academy. It would in almost every instance have a well furnished library, good philosophical apparatus, and all the aids necessary to illustrate the different branches of science. The cost of these would not be great, and one set would answer for several hundred scholars, as well as for a small class. Private academies do not, and would not have these advantages; but for public schools, where all citizens would be benefitted alike, they would be procured as they were needed. Again, the advantages of a division of labor among teachers cannot, except in large cities, be realized on any other plan; and this of itself saves twenty-five per cent, in expense, while the instruction is more accurate. Such a school would generally produce a township library and lyceum, with public lectures; it would beget and cherish a love of science in the places where science ought to dwell, and where the benefits of science could be made practically useful. They would become the depository of all minerals and geological specimens, where natural history would be studied with very great advantage, and every part of the whole system would form so many links in a strong chain, that would bind our children to their country and her institutions. This high-school would re-act upon the district schools, and being itself a model or standard superior to all others in the township, would promote a healthy spirit and action among

school officers and teachers around;—here would invariably be formed literary societies, developing and improving the powers of the young, and furnishing a useful mode of spending the leisure, that is now, for want thereof, too frequently spent in vicious indulgences.

5. This would meet the views of the wealthy, and thus interest them in the general cause of education. They now sometimes complain, that they get no good of all their taxes for schools, because the district schools do not go far enough; and that notwithstanding, they have, after all, to send their children to other schools, to prepare them for business or college. Go to the preparatory schools of any of your colleges, and see them crowded with boys, that are totally unfit to leave the guardian, watchful care of parents. Inquire why these are sent from home at this tender age, and you will be told, they have no schools near home. Thus the father pays more for one year's tuition in a preparatory department at college, from home, in the shape of board, washing, mending, room-rent, etc., than on the plan I have named, it would cost to prepare all his sons for college, or for any of the learned professions. Now it is well known, that three-fourths of those who go to college, never graduate; or for some cause, they leave long before they acquire as much learning as would be furnished by the high-school at home, on this plan. For the sake of justice, as well as the permanent prosperity of the schools, it will be found indispensable to make public provision for such institutions as will interest all classes; and this can only be done on the principle of adapting public institutions to public wants. You must educate the young together, until the age arrives when the most lasting friendships are formed. A very few may object to sending to a free school with all classes of children. Pride has much to do, even in our republican country; but when it becomes fashionable, and when the expense is made such that they can feel it, (for no man feels his school-tax now), these objects will be operated upon by a feeling that always goes with pride, and is generally stronger, (I mean self-interest). They will then consult their own interest, and suffer their children to enjoy the same advantages as others, and upon the same terms.

I may not have said enough in reference to district schools. Let it be distinctly understood, that I would not divert from these any of their support; let them be improved, and made the best schools in the country for all the branches there taught, and let every district have proper female instruction as well as male, to meet the wants of females.

One objection that might be urged against the plan of township high-schools, is that of expense. On another occasion, and with more time, I would go into this calculation; but for the present, I state the fact, that it would be a saving of expense.

It is proper to guard myself against the charge of laying a plan to supercede private teachers. The private as well as public teachers with whom I am acquainted, I am proud to claim for my personal friends, without an exception;—nor would I do aught to interfere with the rights of either. None of them receive now, more than a sufficient compensation, and few even that;—but should the time come when our public schools shall be so good and so numerous, as to meet the entire demands of the community, they will command the services of all the teachers at fair salaries; and there are few who could stand an examination, that would not prefer a place in a well regulated public institution, in preference to the precarious and hard-earned salary which they now receive, which, if pecuniary reasons only were consulted, they would long since have abandoned. Nothing but a love of teaching would, under the past and present circumstances, retain a man of talents long in the profession. Private schools may, and probably will, always be kept, but the utmost good feelings ought to be cherished between the teachers of both; and when once a sufficient public provision is made, it will of course elevate the business of teaching into a lucrative and honorable profession.

There is one argument in favor of perfecting public schools. It is this:—In almost all the States termed Western, there is a vast amount of school lands and funds. They are, however, of themselves insufficient generally, to effect any important general results; but with an additional provision, in some cases small, in others larger, the full benefits of existing funds and endowments could be fully realized; and unless the whole population, rich and poor, can be made to feel interested in public school endowments, I need not tell their fate;—read the history of English charities, as found in Lord Brougham's investigation, for the fate of ours.

If a little more time had been allowed, I could have compiled a mass of statistical facts, that would have aided us in making up a correct opinion on the subject; but travelling, as I have been, for several months, in the discharge of official duties, no time has been allowed for this, or in fact, to do any thing like justice to the important subject proposed. We must therefore conclude, by a few general remarks. Patriots in every part of the world have looked to these States with hope and fear. Here the experiment of a nation governed by its own laws, and officers of its own selection, has been, and is now making on the most favorable terms. If we cannot succeed, no nation can; and if we can succeed another half century with our institutions unimpaired, all nations can; and in that case, there is little doubt but all nations will. If we fail, no patriot hand will again unfurl the standard of liberty during the present or the ensuing century. The failure of France has caused a retrograde movement in the cause of liberty in Europe, of more than one hundred years.

Again, it is now admitted, that no nation can be free and remain so, unless the whole people are intelligent and moral, in other words, have a good, sound, Christian education; for let it be remembered that we are a Christian people, as well as a republican people, and the principles of the former must support the latter. This kind of education, in our country, (where parents are so intent on making money), must to a great extent, be obtained at school.

We now state it as a fact proved by all history and experience, that private schools will never hereafter, as they have never heretofore, supplied the wants of the public in regard to education; and if any man doubts this question, let him examine the state of education in every country, and we venture to predict, that he will find no place where the whole people are educated, unless it is by public provision. It is therefore useless to argue against all the experience of past and present times; theories will not controvert facts. It is only by making public provision for education that this beautiful system of government with all its advantages in possession and in prospective, can be sustained. Knowledge is power, and by some it will be obtained. It is therefore expedient, because it is in the highest sense patriotic, to educate the whole people; for proof of this, let us refer to the opinions of Washington, and from him down, including almost every prominent statesman, all of whom concur in the general sentiment, that whatever else we may do, we cannot succeed without this. It is philanthropic, and so proved, because it is advocated by every man who lays the smallest claim to philanthropy, from Benjamin Franklin down. It accords fully with christianity, and is so proved by the concurrence of all christians of every denomination, and especially by the warm advocacy of ministers of the gospel. It is republican as well as patriotic. And finally, it is the desire of the wise and good of every party, political and religious, in our land.

If, then, this project be, as we have said, practical,—if the legislatures have constitutional power,—if public opinion will sustain them in its exercise,—if all the States have already a vast amount of funds and property for this purpose, which will be lost if not thus used,—if it will secure an efficient system for all,—if it will vastly increase the mental powers of the people in every department,—if it will be in the aggregate a saving of expense,—if in public schools thus regulated, the greatest improvement can be made,—if it would certainly secure the co-operation of both rich and poor,—if it would secure the kind of instruction for both male and female, that is adapted to our country,—if, from the general fertility of our soil, we can always assign a proper portion of territory to a district or high-school,—if our success as a nation is looked to, and prayed for, by patriots all over the land, and if that

success is in a great measure dependent on public instruction, and if no other plan has ever been found sufficient,—if patriotism, philanthropy, christianity, civil and religious liberty, and the general happiness of all our people are in a great measure dependent on this system, (and all these and more are stated, and, we think, proved), what other arguments do you require in its favor? We will not turn from the bright side of the picture, and paint the evil consequences of a neglect in this department, because we do not believe that it will be neglected much longer. The difficulty has been neglect, not opposition. Now the cry comes to us from every part of the State and from all the States, demanding more efficient organization, saying, "remove the great amount of machinery in the laws, simplify them, make but few school officers, make them responsible, pay them a small compensation, and let them move onward." To this call we heartily respond; and looking down the prospective of a few years, we behold this great valley of sister States all dotted over with school-houses, and here and there, through every plain, the handsome academy rear its head and invite the youth from the surrounding country to drink the pure waters of learning,—and still more seldom, but sufficient for the purpose, the stately college dome rise, furnishing a still higher treat to those whose love of learning, rather than of ease, will take shelter within its walls. That this will all take place in a score of years, let no friend doubt. If *we* begin to doubt, well may others. Rather let us move forward, with the broad flag on which is inscribed all the motives I have named, and the same Providence that has cleared our way hitherto, will still lead us on to the consummation of all that we so heartily desire. But it must be remembered, this is a work that cannot be done without labor. Every man and woman has something to do; and however small that something may be, it is the concentration of all these humble efforts, that must lead us to ultimate success.